North Carolina/National Marine Fisheries Service

Cooperative Regional Statistics Program

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Completion Report for Cooperative Agreement NA17NMF4340326
April 1, 2017- March 31, 2022

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ABSTRACT

The North Carolina Trip Ticket Program (NCTTP) collected trip ticket reports over the period of April 1, 2017 to March 31, 2022. On average, 531 fish dealers reported data annually throughout coastal North Carolina on 102,631 trip tickets, 61,061 electronic tickets and 41,570 paper tickets. Originally, this fund supported two commercial port agents and one data control clerk, now, due to increases in fringe and salary costs, CSP only funds one port agent and one data control clerk. The commercial port agents and data control clerk funded by this project administered monthly oversight of the data through detailed review and processing. The number of seafood dealers reporting their trip tickets electronically has decreased 10% since 2017. Despite the overall decrease in number of dealers reporting electronically, the ratio of dealers reporting electronically relative to the total number of dealers has increased 6%, with the number of trip tickets received from these dealers accounting for over 59% of the total number of tickets received by the NCTTP. The NCTTP continues to compile its semi-annual and annual landings bulletins and reports and sends these out to seafood dealers and other entities twice a year. Commercial landings data obtained from the NCTTP are used in state and federal fisheries management plans, fisheries management plan updates, stock assessments, and stock status reports, and are provided to fisheries managers and the public through data requests. Data are submitted to the Atlantic Coastal Cooperative Statistics Program monthly. Enhancements continue to be made to the NCTTP to improve efficiency and to address the needs of the commercial fishing industry and fisheries managers.

Final Project Cost:

	Budget	Expenditures	Balance
	$659,340	$647,334.53	$12,005.47
Total	**$659,340**	**$647,334.53**	**$12,005.47**

ACKNOWLEDGMENTS

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1 INTRODUCTION

Commercial fishery statistics are important components in the development of fishery management strategies and for describing commercial fisheries. Recognizing the importance of accurate and timely commercial fishery statistics, fisheries agencies of the South Atlantic states (North Carolina, South Carolina, Georgia, and Florida) joined with the National Marine Fisheries Service (NMFS) in 1978 to collect fishery statistics for the region. The initial drive and funding for the regional program came from the Atlantic States Marine Fisheries Commission (ASMFC) State/Federal Fisheries Management Program. Additional funding was provided by NMFS Southeast Regional Office to continue the program and implement cooperative agreements with each state. The first cooperative agreements were signed in October 1980. The South Atlantic State/Federal Statistical Committee serves as the coordinating group for the regional activities.

In 1994, a cooperative agreement between the North Carolina Division of Marine Fisheries (DMF) and NMFS was signed to continue this program, in cooperation with the newly implemented North Carolina Trip Ticket Program (NCTTP). A second agreement was signed in 1997. This cooperative agreement is known as the Cooperative Statistics Program (CSP).

Prior to 1994, commercial fishery statistics in North Carolina were collected through a voluntary survey program that was administered to seafood dealers in the state through a joint effort of NMFS and DMF. The NCTTP was initiated due to a decrease in cooperation in reporting under the prior voluntary program, as well as an increase in demand for complete and accurate trip-level commercial harvest statistics by fisheries managers (Bianchi 2004; Sabo 2001; Watterson 1999; Lupton and Phalen 1996). The NCTTP uses specialized trip ticket forms that are completed by seafood dealers when a commercial fisherman completes a fishing trip and sells their catch. The trip ticket forms record the amount of landings for each species sold to the dealer, the area where the fishing activity occurred, commercial fishermen and vessel license numbers, date of the fishing trip, and the fishing gear used during the trip. The detailed data obtained through the NCTTP allow for the calculation of effort (i.e., trips, licenses, fishermen, vessels) in each fishery that was not available prior to 1994 and provides a much more accurate record of North Carolina's seafood harvest.

The NCTTP is composed of a coordinator, three biologists, five port agents, two data control clerks, and one data entry clerk. Funds from CSP were originally used to fund two port agents and one data control clerk. Now, due to increases in fringe and salary costs, CSP only funds one port agent and one data control clerk. The primary duties of the port agents include being the first point of contact between the seafood dealers and the NCTTP, training seafood dealers on how to fill out trip tickets, answering questions seafood dealers may have about the program, editing trip ticket data, and collecting ex-vessel value data. The primary duties of the data control clerks include processing trip tickets received through mail, initial screening and verification of trip tickets, entering edits received from port agents, and completing supply requests.

The number of seafood dealers reporting their trip tickets electronically has decreased 9.6% since 2017 but the ratio of dealers reporting electronically relative to total dealers has increased 5.6% over the same time. This increase is due to reporting requirements from NMFS, and to a 2013 North Carolina Marine Fisheries Commission (NCMFC) rule that requires electronic reporting from dealers who buy more than 50,000 pounds on average of finfish over the most recent three-year period. Electronic reporting software is free to any seafood dealer and the NCTTP staff provides training for seafood dealers who use it.

2 GOAL

The goals of CSP are to ensure the most efficient data collection methods are used and to ensure the accuracy of commercial fisheries data collected through the NCTTP. These data are essential and will be used to assess fishery stocks, make management recommendations, assess the value of fisheries, and document participation.

3 METHODS

Data collection activities were conducted from April 1, 2017, through March 31, 2022. Methods discussed below were developed at the beginning of the NCTTP and are still currently followed. Fish dealers are required, under North Carolina General Statutes 113-168.2, 113-169.3, 113-170.3, 113-181, and 113-228, to provide data on trip ticket forms supplied by DMF on the quantity and type of fish landed per trip. In 2004, DMF began offering a new software package, free of charge, to fish dealers interested in reporting trip ticket data electronically via the Internet. The new software package replaced the previous software, which was available through a private vendor that fish dealers had to purchase and allowed federally permitted dealers in North Carolina to meet reporting requirements of NMFS Northeast Region, NMFS Southeast Region, and NMFS HMS. Port agents were trained on the installation requirements of the software, to provide technical support to dealers, and to install the software for dealers involved in electronic reporting.

Licensed fish dealers submit trip ticket data to DMF by the 10th of the following month. The NCTTP data control clerks process the data and maintain hard copy master files. The NCTTP commercial port agents review trip ticket reports from dealers in their assigned geographic areas and make edits when necessary. The geographic areas assigned to the commercial port agents are primarily based by county. The commercial port agent funded through this project is stationed in Washington while the other four port agents, not funded by this project, are stationed in Elizabeth City, Manteo, Morehead City, and Wilmington. The port agent stationed in Elizabeth City was at one time supported by these funds, but now no longer is.

Quality control measures are maintained by a Conservation Biologist I to identify potential errors. The Conservation Biologist I is also responsible for maintaining seafood dealer compliance logs and coordinates activities with the port agents to address compliance issues (primarily nonreporting and late reporting issues).

Port agents also collect value data from cooperative dealers and record the data on standard forms. Ex-vessel price collection is not mandatory in the NCTTP; however, more dealers have been providing value information since the introduction of the electronic reporting software, which has dramatically increased the number of price records collected annually. This increase is in part due to the ability of dealers to maintain value data in the reporting software, which they can voluntarily share with DMF. Port agents serve as liaisons between DMF and fish dealers, instructing dealers on the NCTTP reporting requirements and keeping them informed of everchanging fisheries regulations and issues. Data are submitted to the ACCSP within thirty days of the end of the collection month. A preliminary end of year upload is then submitted to the ACCSP in April and then a final end of year upload is submitted to the ACCSP in August.

4 RESULTS

Results are discussed for only those years with complete data available from January through December (2017-2021). Data for January to March 2022 are still preliminary and have not yet gone through the complete editing process, therefore these data are not included in this report. Commercial landings ranged from a low of 42.3 million pounds in 2021 to a high of 54.4 million pounds in 2017. The value of the commercial landings ranged from $77.6 million in 2020 to $96.7 million in 2017. An average of 531 seafood dealers submitted trip tickets each year (Table 4.1). A total of 513,154 trip tickets were processed, representing 514,448 trips containing 1,598,664 records from 2017 to 2021 (Tables 4.1 and 4.2).

There are two reasons why the number of trips does not equal the number of trip tickets reported. First, the NCTTP has developed a trip ticket to record multiple crab pot trips (up to six) on a single form. Second, starting in July 1999, a new field was developed on the trip ticket form to help denote whether the landings from a single trip were split between multiple seafood dealers. This field is called the transaction number and whenever that field has a value greater than one, it indicates that the landings on the trip ticket were split with another seafood dealer. Any trip ticket with a transaction number greater than one is not included in the trip count calculations to reduce duplication.

The number of trip tickets submitted electronically from 2017 to 2021 ranged from 53,863 to 74,324 (Table 4.2). In 2021, the number of trip tickets reported electronically represented 60.6% of the total number of trip tickets submitted (Table 4.2). Ex-vessel prices submitted by the port agents monthly, combined with prices submitted electronically by dealers resulted in a total of 624,048 price records between 2017 and 2021 (Table 4.3). With the implementation of the

software program, over 97% of the price records were received through electronic submissions (Table 4.3).

Total annual landings for 2017 to 2021, summarized by county, waterbody and gear are represented in Tables 4.4 – 4.6. Dare, Hyde, Carteret, Pamlico, Tyrrell, and Camden counties consistently had the highest landings over the period. Commercial fisheries operating in the ocean (state and federal waters, and north and south of Cape Hatteras combined), Pamlico Sound, and Albemarle Sound accounted for the top three areas for commercial landings each year. Commercial landings by gear have varied over the last five years; however, crab pots and gill nets (all types combined) were the top two ranked gears for each year from 2017 to 2021 (Tables 4.4 – 4.6).

The 2021 Annual Landings Bulletin highlights the commercial landings by species from 2017 to 2021. Species consistently ranked among the top five in commercial landings each year from 2017 to 2021 included: Blue Crab (*Callinectes sapidus*), penaeid shrimp (*Farfantepenaeus aztecus, F. duorarum, Litopenaeus setiferus*), Summer Flounder (*Paralichthys dentatus*), Striped Mullet (*Mugil cephalus*), and catfishes (*Ameiurus* spp*., Ictalurus furcatus, I. punctatus*).

5 DISCUSSION

The NCTTP continues to function as a leading data collection program on the east coast. Semi-annual and annual landings bulletins and dealer reports are published and posted to the NCDMF website. Since April 2017, six annual dealer reports and landings bulletins have been released. To maintain high quality data, DMF keeps the commercial fishing industry informed on program requirements and solicits recommendations for improvements.

North Carolina's commercial fisheries were affected by several different factors over the last five years. Changes in fisheries management measures were implemented for a variety of species to help recover and sustain stocks in state and federal waters as well as to help reduce interactions with protected species. These management changes directly impacted commercial fishing. One of the main fisheries impacted by management is Southern Flounder, which was determined to be overfished with overfishing occurring in the 2019 stock assessment update. Since then, the Southern Flounder commercial season has been shortened and a quota has been implemented. Various changes in market conditions as well as extreme weather events (hurricanes, abnormally wet years, and abnormally dry years) also continue to impact commercial fishing. In 2018, Hurricane Florence shut down many fall fisheries and caused severe damage to fishing industry infrastructure, and in 2020, the COVID-19 pandemic limited fishing opportunities and decreased market demand, particularly from restaurants. Effects of both Hurricane Florence and the COVID-19 pandemic are still being felt in 2022. Data collected through the NCTTP helped document these impacts.

Preliminary trip ticket data, excluding value data, continues to be available approximately 30 to 60 days after submission. These data have not gone through all quality control checks but do reflect data exactly as submitted and are available upon request. Data submitted electronically

including value information that are available the same day they are received because they do not have to go through the same type of processing as paper tickets. Although electronically submitted data may be available the day they are received, it still takes time for those data to go through all quality control checks. Value data gathered by the port agents and submitted by paper data sheets are not available until the year-end data are finalized. Thus, all value data are suppressed until the year-end data are released, which is typically in April.

Collection of commercial statistics through a mandatory trip ticket system, enhanced by port agent interaction, continues to greatly increase the accuracy and detail of data available to North Carolina fishery managers. Data continues to be available on effort, participation, gear, and location in addition to summarized landings. These data are available to state and federal fishery managers and the public for all commercial species landed in North Carolina.

To further enhance commercial fishery data collection and availability in North Carolina, improvements to the NCTTP will continue in upcoming years. The ability to submit trip ticket reports electronically has increased over the last few years, primarily in response to reporting requirements established by NMFS. The ratio of seafood dealers using this method of reporting relative to total dealers is expected to increase as NMFS continues to implement mandatory electronic reporting for federal species and because of rule changes by the NCMFC. Additionally, social behaviors suggest electronic technologies are becoming more widespread and implemented, even within the commercial seafood industry.

The NCTTP continues to update warning tables to aid port agents in the editing and verification process to ensure high quality trip level data. Enhancements continue to be made to help the NCTTP become more efficient by developing new species and gear codes, and collaborating with NMFS to help with the electronic reporting of landings data.

The NCTTP continues to adapt to the needs of the commercial fishing industry, DMF, and NMFS. Over the past five years, new species codes developed include small, medium, and large Permit (*Trachinotus falcatus*) and Lookdown (*Selene vomer*), medium Atlantic Menhaden (*Brevoortia tyrannus*) bait, Frigate Mackerel (*Auxis thazard*), Bullet Mackerel (*Auxis rochei*), Chub Mackerel (*Scomber colias*), Banded Drum (*Larimus fasciatus*), and Caribbean Red Snapper (*Lutjanus purpureus*). In addition, the NCTTP created a new gear code for Oyster cages in response to the growing Oyster aquaculture industry.

The NCTTP has received level funding from the CSP since 2013, when our funding was cut 10% from the previous year's funding. Unfortunately, this funding has not kept up with increases in fringe and salary expenses, and one of the port agent positions had to be dropped from this grant. We also have not been able to use this funding source to support our electronic program that seafood dealers can use to report electronically. If the CSP continues to be level funded, then the NCTTP program will need to continue to find or secure additional funding.

6 LITERATURE CITED

Bianchi, A. 2004. Interstate Fisheries Management Program Implementation for North Carolina. North Carolina Commercial Statistics System Enhancement, October 2001 – June 2004. North Carolina Division of Marine Fisheries, Morehead City, North Carolina. 399 pp.

Lupton, B. Y. and P. S. Phalen. 1996. Designing and Implementing a Trip Ticket Program. North Carolina Division of Marine Fisheries, Morehead City, North Carolina. 32 pp + appendices.

Sabo, L. 2001. Interstate Fisheries Management Program Implementation for North Carolina: North Carolina Commercial Statistics System Enhancement, April 1999-September 2001. North Carolina Division of Marine Fisheries, Morehead City, North Carolina. 119 pp.

Watterson, J. C. 1999. Interstate Fisheries Management Program Implementation for North Carolina: North Carolina Commercial Statistics System Enhancement, April 1996-March 1999. North Carolina Division of Marine Fisheries, Morehead City, North Carolina. 182 pp. + appendix.

7 TABLES

Table 4.1. Annual commercial landings, value, dealers, and trips for North Carolina, 2017 – 2021.

Year	Pounds	Value	Dealers	Trips
2017	54,424,502	$96,694,947	532	126,750
2018	45,763,779	$77,840,471	547	100,822
2019	53,060,292	$86,813,890	532	100,638
2020	42,997,600	$77,594,910	531	93,106
2021	42,344,315	$89,749,701	512	93,132

Table 4.2. Number of records, paper trip tickets processed, and trip tickets reported electronically by the North Carolina Trip Ticket Program, 2017 – 2021.

Year	Records	Paper	Electronic	%Electronic
2017	392,123	51,092	75,073	59.50
2018	312,312	40,265	60,568	60.07
2019	308,747	42,042	58,603	58.23
2020	301,841	37,713	54,654	59.17
2021	283,641	36,737	56,407	60.56

Table 4.3. Number of ex-vessel price records processed by the North Carolina Trip Ticket Program and percent received electronically, 2017 – 2021.

Year	Total	Paper	Electronic	%Electronic
2017	158,006	2,858	155,148	98.19
2018	120,193	3,570	116,623	97.03
2019	118,096	2,016	116,080	98.29
2020	115,779	2,952	112,827	97.45
2021	111,974	1,323	110,651	98.82

Table 4.4. Annual North Carolina commercial landings (pounds) and value ($) by county, 2017 – 2021.

	2017		2018	
	Pounds	Value	Pounds	Value
Beaufort	2,489,730	$2,636,031	2,096,939	$2,307,721
Bertie	*	*	*	*
Brunswick	1,648,618	$4,558,704	1,113,915	$3,278,621
Camden	2,916,790	$3,884,037	2,363,115	$2,736,295
Carteret	8,682,629	$20,669,552	6,743,677	$16,597,862
Chowan	735,952	$304,320	792,796	$299,936
Craven	324,944	$442,415	389,913	$629,376
Currituck	1,416,051	$1,699,968	1,344,051	$1,571,343
Dare	14,138,748	$23,683,749	12,619,222	$19,282,376
Hertford	*	*	*	*
Hyde	7,316,600	$12,818,311	6,385,772	$10,817,966
New Hanover	1,259,341	$2,699,377	1,035,801	$2,223,049
Onslow	2,316,507	$5,794,663	1,459,920	$3,581,886
Pamlico	4,281,749	$9,919,977	3,726,906	$8,051,828
Pasquotank	892,232	$1,154,145	672,481	$796,834
Pender	845,685	$1,929,209	609,985	$1,354,538
Perquimans	1,570,223	$1,770,108	1,612,047	$1,922,785
Tyrrell	3,430,334	$2,397,800	2,684,793	$2,149,152
Washington	0	$0	0	$0
ICounty**	158,370	$332,580	114,572	$241,251

* *Denotes confidential data.*

** *ICounty refers to all other inland counties not otherwise represented here and confidential coastal counties.*

Table 4.4 (continued). Annual North Carolina commercial landings (pounds) and value ($) by county, 2017 – 2021.

	2019		2020	
	Pounds	Value	Pounds	Value
Beaufort	2,279,622	$2,378,045	1,513,641	$2,391,462
Bertie	*	*	*	*
Brunswick	1,652,079	$4,878,701	1,078,598	$3,204,658
Camden	2,844,898	$3,456,794	1,495,670	$2,557,531
Carteret	7,440,881	$18,663,294	7,406,887	$16,834,239
Chowan	989,991	$300,643	921,665	$311,424
Craven	373,948	$657,717	349,559	$678,947
Currituck	1,643,501	$1,851,977	1,217,944	$1,787,690
Dare	13,967,431	$19,823,900	12,311,221	$18,790,354
Hertford	*	*	0	$0
Hyde	6,454,595	$9,210,140	4,820,304	$8,214,279
New Hanover	1,476,483	$3,022,697	1,248,657	$2,790,603
Onslow	2,058,937	$5,369,638	1,280,804	$3,536,819
Pamlico	4,239,713	$9,040,913	4,177,019	$9,157,743
Pasquotank	625,129	$688,648	412,012	$494,551
Pender	778,964	$1,625,648	859,216	$2,040,403
Perquimans	1,375,277	$1,441,073	1,040,517	$1,152,936
Tyrrell	4,779,513	$4,100,869	2,695,701	$3,276,519
Washington	0	$0	*	*
ICounty**	118,346	$331,444	168,230	$374,686

* *Denotes confidential data.*

** *ICounty refers to all other inland counties not otherwise represented here and confidential coastal counties.*

Table 4.4 (continued). Annual North Carolina commercial landings (pounds) and value ($) by county, 2017 – 2021.

	2021	
	Pounds	Value
Beaufort	1,432,832	$2,591,883
Bertie	*	*
Brunswick	1,112,705	$3,790,950
Camden	1,835,382	$3,779,718
Carteret	7,302,839	$17,674,115
Chowan	872,702	$265,344
Craven	313,076	$791,718
Currituck	1,412,828	$2,654,597
Dare	10,878,793	$22,591,276
Hertford	*	*
Hyde	4,407,157	$8,984,023
New Hanover	1,132,968	$2,874,848
Onslow	1,276,025	$3,657,808
Pamlico	4,107,614	$11,050,579
Pasquotank	*	*
Pender	882,294	$2,358,739
Perquimans	1,089,089	$1,136,325
Tyrrell	3,260,218	$4,201,310
Washington	*	*
ICounty**	1,047,463	$1,365,711

** Denotes confidential data.*
*** ICounty refers to all other inland counties not otherwise represented here and confidential coastal counties.*

Table 4.5. Annual North Carolina commercial landings (pounds) and value ($) by water body, 2017 – 2021.

	2017		2018	
	Pounds	Value	Pounds	Value
Albemarle Sound	9,062,066	$11,022,889	9,029,616	$10,233,036
Alligator River	1,486,736	$979,546	1,085,380	$880,030
Back Bay (VA)**	*	*	*	*
Bay River	454,972	$1,366,121	267,836	$529,651
Bogue Sound	436,373	$903,104	385,882	$798,333
Cape Fear River	608,775	$1,013,254	475,027	$814,434
Chowan River	679,860	$257,895	771,864	$293,123
Core Sound	1,444,732	$2,838,025	1,347,754	$2,670,072
Croatan Sound	1,140,806	$1,806,397	808,488	$1,006,159
Currituck Sound	1,388,932	$1,689,358	1,250,359	$1,479,810
Inland Waterway (Brunswick)	127,357	$179,346	109,163	$226,790
Inland Waterway (Onslow)	93,290	$281,447	89,870	$210,758
Lockwood's Folly	50,445	$233,505	22,585	$115,536
Masonboro Sound	243,263	$730,820	222,857	$601,486
Neuse River	1,175,481	$1,567,407	1,055,950	$1,257,554
New River	587,568	$1,807,639	492,098	$1,361,714
Newport River	391,050	$997,429	278,004	$647,286
North River/Back Sound	189,887	$620,042	147,244	$471,819
Ocean 0-3 mi, N of Cape Hatteras	2,462,230	$3,548,132	1,336,241	$2,137,321
Ocean 0-3 mi, S of Cape Hatteras	5,927,905	$10,006,407	4,133,674	$4,897,790
Ocean >3 mi, N of Cape Hatteras	5,985,676	$15,594,377	5,320,914	$14,754,324
Ocean >3 mi, S of Cape Hatteras	2,609,752	$6,758,172	2,689,386	$6,718,110
Pamlico River	1,394,483	$1,504,766	1,140,838	$1,289,331
Pamlico Sound	14,058,504	$26,320,070	11,401,119	$20,658,714
Pasquotank River	223,713	$252,401	176,053	$197,473
Perquimans River	57,025	$63,599	74,899	$75,921
Pungo River	586,068	$576,013	313,813	$356,627
Roanoke River***	65,071	$21,031	*	*
Roanoke Sound	697,809	$1,360,679	593,091	$1,059,223
Shallotte River	58,971	$248,387	40,091	$182,816
Stump Sound	202,433	$534,404	279,033	$643,212
Topsail Sound	391,408	$1,350,733	317,523	$1,067,092
White Oak River	141,861	$261,550	109,252	$207,271

* *Denotes confidential data.*

** *Confidential landings for Back Bay (VA) were incorporated into Currituck Sound.*

*** *Confidential landings for Roanoke River were incorporated into Chowan River.*

Table 4.5 (continued). Annual North Carolina commercial landings (pounds) and value ($) by water body, 2017 – 2021.

	2019		2020	
	Pounds	Value	Pounds	Value
Albemarle Sound	9,682,655	$9,836,271	5,799,703	$7,672,663
Alligator River	1,895,039	$1,624,454	1,020,152	$1,318,213
Back Bay (VA)**	20,154	$23,838	32,568	$53,216
Bay River	228,673	$430,290	202,654	$397,346
Bogue Sound	429,881	$804,500	420,155	$791,585
Cape Fear River	769,482	$1,169,355	619,883	$1,170,604
Chowan River	869,503	$202,302	794,723	$234,950
Core Sound	1,549,863	$3,374,932	1,397,054	$2,579,772
Croatan Sound	1,048,597	$1,181,189	762,998	$1,195,354
Currituck Sound	1,664,603	$1,950,501	1,059,543	$1,565,253
Inland Waterway (Brunswick)	131,006	$253,633	178,829	$438,858
Inland Waterway (Onslow)	56,320	$135,716	73,653	$136,956
Lockwood's Folly	42,114	$192,696	27,153	$108,373
Masonboro Sound	248,013	$622,168	216,439	$523,748
Neuse River	1,356,251	$1,628,219	1,300,820	$2,010,755
New River	550,344	$1,374,121	454,427	$1,167,843
Newport River	268,251	$667,310	212,323	$552,680
North River/Back Sound	141,075	$494,901	146,080	$496,668
Ocean 0-3 mi, N of Cape Hatteras	3,488,863	$6,387,923	3,147,907	$4,778,008
Ocean 0-3 mi, S of Cape Hatteras	6,531,858	$11,959,144	5,723,311	$10,874,004
Ocean >3 mi, N of Cape Hatteras	5,972,049	$16,147,891	5,149,493	$12,363,423
Ocean >3 mi, S of Cape Hatteras	2,862,410	$7,180,731	2,121,627	$5,476,131
Pamlico River	1,418,768	$1,527,236	910,072	$1,514,366
Pamlico Sound	9,062,642	$12,859,998	9,092,179	$15,738,050
Pasquotank River	173,304	$210,546	188,262	$312,948
Perquimans River	239,772	$277,593	336,504	$445,872
Pungo River	694,719	$736,573	260,646	$410,997
Roanoke River***	*	*	*	*
Roanoke Sound	851,046	$1,207,579	619,155	$1,010,284
Shallotte River	41,077	$193,872	29,747	$125,631
Stump Sound	286,551	$790,651	308,750	$931,986
Topsail Sound	425,992	$1,228,014	322,696	$1,083,298
White Oak River	98,438	$167,990	68,138	$115,009

* *Denotes confidential data.*

** *Confidential landings for Back Bay (VA) were incorporated into Currituck Sound.*

*** *Confidential landings for Roanoke River were incorporated into Chowan River.*

Table 4.5 (continued). Annual North Carolina commercial landings (pounds) and value ($) by water body, 2017 – 2021.

	2021	
	Pounds	Value
Albemarle Sound	7,197,285	$10,909,398
Alligator River	1,196,776	$1,523,990
Back Bay (VA)**	*	*
Bay River	170,004	$327,020
Bogue Sound	348,164	$792,750
Cape Fear River	417,737	$999,056
Chowan River	940,258	$278,658
Core Sound	1,512,042	$3,184,189
Croatan Sound	592,595	$1,277,593
Currituck Sound	1,533,648	$2,808,828
Inland Waterway (Brunswick)	116,430	$343,812
Inland Waterway (Onslow)	99,329	$221,696
Lockwood's Folly	21,839	$80,177
Masonboro Sound	180,084	$517,580
Neuse River	1,294,064	$2,158,868
New River	279,617	$1,046,451
Newport River	331,150	$1,195,161
North River/Back Sound	188,671	$673,776
Ocean 0-3 mi, N of Cape Hatteras	3,867,946	$9,560,618
Ocean 0-3 mi, S of Cape Hatteras	5,445,961	$12,187,201
Ocean >3 mi, N of Cape Hatteras	5,497,995	$15,489,485
Ocean >3 mi, S of Cape Hatteras	1,546,464	$4,623,010
Pamlico River	922,280	$1,625,183
Pamlico Sound	7,043,810	$13,292,936
Pasquotank River	124,735	$169,643
Perquimans River	70,696	$67,924
Pungo River	249,634	$479,760
Roanoke River	*	*
Roanoke Sound***	552,395	$1,339,590
Shallotte River	25,979	$148,628
Stump Sound	206,833	$950,188
Topsail Sound	338,108	$1,383,433
White Oak River	51,460	$112,345

* *Denotes confidential data.*

** *Confidential landings for Back Bay (VA) were incorporated into Currituck Sound.*

*** *Confidential landings for Roanoke River were incorporated into Chowan River.*

Table 4.6. Annual North Carolina commercial landings (pounds) and value ($) by gear, 2017 – 2021.

	2017		2018	
	Pounds	Value	Pounds	Value
Beach Seine	58,973	$49,480	25,711	$24,499
By Hand	806,631	$5,191,570	636,209	$3,937,438
Cast Net	97,085	$68,827	94,441	$82,363
Channel Net	147,305	$239,931	120,068	$183,309
Clam Dredges	11,198	$122,614	10,423	$111,814
Clam Trawl Kicking	1,428	$9,901	398	$3,066
Crab Pot	18,170,586	$18,259,177	16,594,658	$17,820,031
Crab Trawl	182,417	$187,746	39,183	$43,000
Eel Pot	24,744	$14,000	16,539	$26,674
Fish Pot	205,759	$431,658	182,820	$480,000
Flounder Trawl	2,271,684	$7,720,079	2,184,147	$7,988,145
Flynet	131,104	$130,470	40,460	$45,714
Fyke Net	442,179	$181,449	317,892	$122,505
Gigs	162,801	$597,828	104,014	$406,173
Gill Net (Anchored)	8,438,868	$9,256,330	7,956,036	$7,589,685
Gill Net (drift)	274,989	$378,767	506,328	$558,266
Gill Net (runaround)	1,397,829	$1,445,559	1,245,107	$1,154,157
Haul Seines	26,609	$38,887	13,901	$17,179
Longlines	2,183,565	$5,404,919	1,642,483	$4,490,229
Other Gears**	122,274	$957,315	120,165	$941,227
Oyster Cage/Rack/Bag	*	*	*	*
Oyster Dredge	67,955	$588,505	14,669	$123,678
Peeler Pot	1,019,835	$3,879,460	455,821	$1,895,326
Peeler Trawl	*	*	*	*
Pound Nets	1,515,178	$3,490,860	1,470,272	$2,503,822
Rakes	182,678	$1,292,249	100,456	$783,553
Rod-n-Reel	1,084,602	$3,340,542	1,110,625	$3,450,166
Shrimp Trawl	13,393,311	$28,611,977	9,404,179	$19,464,120
Skimmer Trawl	620,273	$1,071,896	277,552	$495,260
Spears, Diving	63,471	$255,184	57,287	$248,122
Tongs, Hand	74,543	$635,569	57,680	$474,348
Trolling	1,212,832	$2,833,430	921,978	$2,367,817
Trotline	31,796	$8,768	44,401	$11,133

** Denotes confidential Data*

*** Other gears include: butterfly net, conch pot, dip net, scallop dredge, patent tongs, scallop scoop, scallop trawl, shrimp pot, tongs, turtle hooks, turtle pot. Also contains any confidential data.*

Table 4.6 (continued). Annual North Carolina commercial landings (pounds) and value ($) by gear, 2017 – 2021.

	2019		2020	
	Pounds	Value	Pounds	Value
Beach Seine	56,386	$51,144	69,421	$56,848
By Hand	498,060	$3,332,328	385,480	$2,610,760
Cast Net	103,882	$96,965	103,053	$75,568
Channel Net	42,289	$77,068	83,575	$126,378
Clam Dredges	8,513	$106,764	*	*
Clam Trawl Kicking	414	$3,877	*	*
Crab Pot	22,488,125	$22,781,208	13,217,396	$19,538,452
Crab Trawl	121,471	$114,490	91,746	$95,287
Eel Pot	7,845	$2,942	2,560	$7,616
Fish Pot	119,451	$355,585	99,228	$316,924
Flounder Trawl	2,619,016	$8,234,946	2,095,226	$4,316,834
Flynet	*	*	*	*
Fyke Net	340,844	$128,413	312,274	$124,069
Gigs	108,453	$393,700	40,392	$84,225
Gill Net (Anchored)	7,576,215	$7,206,328	7,792,686	$7,299,905
Gill Net (drift)	1,041,415	$1,144,972	903,251	$1,006,323
Gill Net (runaround)	1,527,379	$1,413,222	1,772,663	$1,731,011
Haul Seines	133,981	$167,587	124,831	$165,577
Longlines	1,593,869	$4,126,437	1,662,584	$4,535,278
Other Gears**	251,443	$1,617,983	235,061	$1,980,729
Oyster Cage/Rack/Bag	322,066	$1,493,442	377,890	$1,606,412
Oyster Dredge	8,768	$71,244	36,816	$302,627
Peeler Pot	495,505	$1,852,077	293,894	$1,078,774
Peeler Trawl	*	*	*	*
Pound Nets	1,319,773	$1,985,287	1,238,860	$1,274,437
Rakes	49,430	$428,060	51,247	$535,366
Rod-n-Reel	1,226,487	$4,106,299	968,808	$3,175,831
Shrimp Trawl	9,410,734	$21,736,744	9,271,050	$21,525,819
Skimmer Trawl	255,420	$422,191	517,221	$1,044,152
Spears, Diving	71,046	$298,706	51,811	$234,952
Tongs, Hand	72,074	$611,234	60,057	$519,280
Trolling	1,145,174	$2,464,014	1,068,085	$2,205,687
Trotline	83,781	$16,885	70,482	$19,724

** Denotes confidential Data*

*** Other gears include: butterfly net, conch pot, dip net, scallop dredge, patent tongs, scallop scoop, scallop trawl, shrimp pot, tongs, turtle hooks, turtle pot. Also contains any confidential data.*

Table 4.6 (continued). Annual North Carolina commercial landings (pounds) and value ($) by gear, 2017 – 2021.

	2021	
	Pounds	Value
Beach Seine	60,268	$60,623
By Hand	522,235	$3,305,030
Cast Net	127,512	$109,243
Channel Net	58,797	$109,906
Clam Dredges	11,519	$144,972
Clam Trawl Kicking	0	$0
Crab Pot	12,346,944	$21,614,578
Crab Trawl	31,893	$44,536
Eel Pot	9,701	$15,343
Fish Pot	79,133	$352,787
Flounder Trawl	2,396,506	$6,376,097
Flynet	*	*
Fyke Net	189,819	$76,750
Gigs	38,758	$108,230
Gill Net (Anchored)	6,466,063	$7,926,539
Gill Net (drift)	1,089,986	$1,441,812
Gill Net (runaround)	3,090,033	$3,119,420
Haul Seines	72,885	$87,858
Longlines	1,533,790	$5,512,289
Other Gears**	79,014	$574,505
Oyster Cage/Rack/Bag	587,391	$2,653,140
Oyster Dredge	51,414	$453,223
Peeler Pot	511,903	$2,363,719
Peeler Trawl	0	$0
Pound Nets	995,757	$1,214,072
Rakes	43,508	$438,955
Rod-n-Reel	906,831	$3,057,759
Shrimp Trawl	9,186,781	$24,774,180
Skimmer Trawl	109,766	$210,829
Spears, Diving	48,279	$214,132
Tongs, Hand	99,477	$873,138
Trolling	732,809	$2,274,166
Trotline	885,213	$261,115

** Denotes confidential Data*

*** Other gears include: butterfly net, conch pot, dip net, scallop dredge, patent tongs, scallop scoop, scallop trawl, shrimp pot, tongs, turtle hooks, turtle pot. Also contains any confidential data.*