Chapter VI: FISHERIES ECONOMICS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PROGRAM NARRATIVE

North Carolina's marine fishery resources are economically and socially important to many of the state's residents, visitors, and coastal communities. These resources support commercial and recreational fisheries that provide an important source of employment, income, recreation, and food. This chapter contains information showing the economic importance of coastal commercial and recreational fisheries in North Carolina, as well as indicators of how these industries are changing over time. This is not meant to be comprehensive of all economic data on state fisheries, but rather a summary of data available for some of the most economically important coastal fishery resources in the state.

Since 1999, the North Carolina Division of Marine Fisheries (NCDMF) has regularly initiated studies in response to the need for economic and social information on North Carolina's fisheries. These studies have included a series of economic and social analyses of the state's recreational fisheries for both marine and anadromous species as well as commercial fisheries occurring in the Atlantic Ocean, Albemarle Sound, Pamlico Sound, Core Sound, and the southern region of the state from Beaufort Inlet to the South Carolina state line. Results from the most recent versions of these studies are used in the socioeconomic sections of state fishery management plans as well as NCDMF's economic impact model for coastal commercial and recreational fishing. The economic impacts presented include output impacts, income impacts, and job impacts. Output impacts represent the total economic output of industry production and business sales while income impacts reflect wages, salaries, and self-employment income. Output impacts and income impacts should not be added, as this would result in double counting. Job estimates represent both full-time and part-time employment positions. All economic impacts represent effects taking place strictly within the state economy of North Carolina.

The NCDMF Fisheries Economics Program sources data from the NCDMF Trip Ticket Program, NCDMF Coastal Angling Program, the National Marine Fisheries Service (NMFS), North Carolina Wildlife Resources Commission Portal Access to Wildlife Systems (NCWRC PAWS) program, as well as survey responses collected from North Carolina recreational and commercial fishing participants and seafood dealers. Data for the tables on commercial fishing are derived from information provided by the NCDMF Trip Ticket Program and use ex-vessel value. Ex-vessel value is the estimated dollar value of commercial harvest during the original transfer of a seafood product from the harvester to the dealer. Data for the tables on recreational fishing are derived from information provided by the NCDMF Coastal Angling Program which includes data from the NMFS Marine Recreational Information Program (MRIP).

The Commercial Fishing Economic Impact Model

The economic impact estimates presented represent those of commercial seafood harvesters, dealers, wholesalers, and retailers and are calculated via the NCDMF commercial fishing economic impact model, last updated July 2017. These estimates are a product of IMPLAN

economic impact modeling software, customized with data from NCDMF and economic multipliers originating from the National Oceanic and Atmospheric Administration (NOAA) Fisheries Commercial Fishing and Seafood Industry Input/Output Model (NOAA 2011; IMPLAN 2018). Commercial landings data from the NCDMF Trip Ticket Program are used as the primary input along with data from North Carolina commercial fishermen and seafood dealers collected during surveys that have been carried out by the NCDMF Fisheries Economics Program (Crosson 2007, 2009, 2010a; Hadley and Crosson 2010; Hadley and Wiegand 2014; Stemle and Wiegand A&B 2017; Stemle and Wiegand 2018). Economic impact estimates for the commercial harvesting and seafood dealer sectors are derived from NCDMF data, while estimates for seafood wholesalers and retailers originate from multipliers found within the NMFS model.

The Coastal Recreational Fishing Economic Impact Model

The economic activity associated with the North Carolina coastal recreational fishing industry is calculated via the NCDMF coastal recreational fishing economic impact model as updated July 2017. The economic impact estimates presented for coastal recreational fishing represent the economic activity generated by both trip expenditures and durable goods expenditures. These estimates are a product of economic data originating from the NOAA Fisheries coastal recreational fishing economic impact estimates for durable goods expenditures and IMPLAN economic impact modeling software input with data from NCDMF for trip expenditures (Gentner and Steinback 2008; Lovell and Steinback 2013). To calculate recreational fishing trip expenditures, the NCDMF coastal recreational fishing economic impact model uses effort data by area (inshore, offshore, onshore) and by mode (i.e., shore, for-hire, private/rental vessel, and man-made) that are derived from the NOAA Fisheries MRIP. These data are combined with angler trip expenditure data collected from North Carolina recreational anglers during surveys that have been carried out by the NCDMF Fisheries Economics Program and North Carolina Sea Grant to provide estimated total coastal recreational fishing trip expenditures (Dumas et al. 2009; Crosson 2010b; Hadley 2012; Stemle 2018). Economic activity estimates for recreational fishing trip expenditures are derived from NCDMF data, while estimates for recreational fishing durable goods expenditures originate from the NMFS model.

The Central Southern Management Area (CSMA) Recreational Fishing Impact Model

The NCDMF has been surveying recreational anglers in several of the major coastal river basins of the central and southern portions of eastern North Carolina since 2004. The focus of these surveys has been gathering catch, effort, demographic, and economic information from anglers targeting anadromous species such as Striped Bass, American Shad, and Hickory Shad. This region, encompassing the Pamlico/Tar River Basin, Neuse River, and Cape Fear River, is referred to as the Central Southern Management Area (CSMA) by NCDMF. The CSMA creel survey was originally designed to gather data on the recreational Striped Bass fisheries occurring in the region; however, American Shad and Hickory Shad were included in the survey estimates beginning in 2012. In 2013, the Cape Fear River was added to the list of coastal river systems for this survey.

To estimate the economic impacts of fishing activity occurring in these coastal river basins, IMPLAN software was used and input with total estimated angler trip expenditures that were calculated based on data collected from anglers in each river basin respectively each year during the CSMA Creel Survey. These expenditures are grouped into categories for lodging, food, ice, bait, boat fuel and oil, and vehicle fuel. Trip expenditures for angling parties were broken down into overall mean expenses per angler hour. Mean trip expenditures were then multiplied by the total estimated angler hours in each river system to provide the estimated total expense per expenditure category.
This can be expressed as:

$$TE= (L, F, I, Ba, Bf, Vf)*Tr$$

where *TE* is the estimated total expenditures, *L* is the average lodging expenditure, *F* is the average food expenditure, *I* is the average ice expenditure, *Ba* is the average bait expenditure, *Bf* is the average expenditure on fuel and oil for a boat, *Vf* is the average expenditure on fuel for a vehicle, and *Tr* is the total number of estimated trips. Once total expenditures were estimated, they were input into IMPLAN software under the appropriate sector to provide the estimated economic impacts generated by the recreational fishing activity examined. These impacts demonstrated large variability annually, which was primarily attributed to changes in survey responses regarding lodging. As lodging constitutes a higher per-trip expenditure than other categories, years that more respondents claim lodging costs, as well as years that fewer respondents specifically note “zero” lodging costs, correlated to higher economic impacts. This variability may be a valid indicator of expenditures annually but may also be a result of implicit survey bias.

LITERATURE CITED

Crosson, S. 2007. A Social and Economic Analysis of Commercial Fisheries in North Carolina: Core Sound, NC. Department of Environment and Natural Resources, Division of Marine Fisheries.

Crosson, S. 2009. A Social and Economic Analysis of Commercial Fisheries in North Carolina: Atlantic Ocean. Department of Environment and Natural Resources, Division of Marine Fisheries.

Crosson, S. 2010a. A Social and Economic Analysis of Commercial Fisheries in North Carolina: Beaufort Inlet to the South Carolina State Line. Department of Environment and Natural Resources, Division of Marine Fisheries.

Crosson, S. 2010b. A Social and Economic Survey of Recreational Saltwater Anglers in North Carolina. Department of Environment and Natural Resources, Division of Marine Fisheries.

Dumas, C., J. Whitehead, C. Landry, and J. Herstine. 2009. Economic Impacts and Recreational Value of the North Carolina For-Hire Fishing Fleet. North Carolina Sea Grant Fishery Resource Grant Report 07-FEG-05.

Gentner, B., and S. Steinback. 2008. The Economic Contribution of Marine Angler Expenditures in the United States, 2006. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service. NOAA Technical Memorandum NMFS-F/SPO-94.

Hadley, J. 2012. A Social and Economic Profile of Ocean Fishing Piers in North Carolina. Department of Environment and Natural Resources, Division of Marine Fisheries.

Hadley, J., and S. Crosson. 2010. A Business and Economic Profile of Seafood Dealers in North Carolina. Department of Environment and Natural Resources, Division of Marine Fisheries.

Hadley, J., and C. Wiegand. 2014. A Social and Economic Analysis of Commercial Fisheries in North Carolina: Albemarle and Pamlico Sounds, NC. Department of Environment and Natural Resources, Division of Marine Fisheries.

IMPLAN Group, LLC. IMPLAN. 2018. Huntersville, NC. IMPLAN.com.

Lovell, S., S. Steinback, and J. Hilger. 2013. The Economic Contribution of Marine Angler Expenditures in the United States, 2011. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service. NOAA Technical Memorandum NMFS-F/SPO-134.

NOAA. 2011. A User's Guide to the National and Coastal State I/O Model. 2011. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service.

Stemle, A., and M. Condon. 2018. Socioeconomic Survey of Recreational Saltwater Anglers in North Carolina 2016. Division of Marine Fisheries, Morehead City, N.C.

Stemle, A., and C. Wiegand A. 2017. A Social and Economic Analysis of Commercial Fisheries In North Carolina: Core Sound to the South Carolina State Line. Division of Marine Fisheries, Morehead City, N.C. Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA), National Oceanic and Atmospheric Administration, under Grant Award NA15NMF4270334.

Stemle, A., and C. Wiegand B. 2017. A Social and Economic Analysis of Commercial Fisheries In North Carolina: Atlantic Ocean. Division of Marine Fisheries, Morehead City, N.C. Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA), National Oceanic and Atmospheric Administration, under Grant Award NA15NMF4270334.

Stemle, A., and C. Wiegand. 2018. A Social and Economic Analysis of Shellfish Growers and Aquaculture Operations. Division of Marine Fisheries, Morehead City, N.C. Atlantic Coastal Fisheries Cooperative Management Act (ACFCMA), National Oceanic and Atmospheric Administration, under Grant Award NA15NMF4270334.

CONTACTS

The socioeconomic program is administered by the North Carolina Division of Marine Fisheries, Morehead City Headquarters Office. For questions regarding the economic data presented, please contact:

North Carolina Division of Marine Fisheries
Economist
VACANT
3441 Arendell ST
P.O. Box 769
Morehead City, NC 28557
800-682-2632

North Carolina Division of Marine Fisheries
Chief, License & Statistics
Brandi Salmon
3441 Arendell ST
P.O. Box 769
Morehead City, NC 28557
800-682-2632
Brandi.Salmon@ncdenr.gov

Table VI.1 Top five commercial species ranked by ex-vessel value of landings.

	2020		2019		2018	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	$19,096,437	Blue Crabs, Hard	$22,194,103	Blue Crabs, Hard	$17,296,000
2	Shrimp, White	$18,772,577	Shrimp, White	$18,878,990	Shrimp, Brown	$11,198,994
3	Oysters	$4,551,576	Flounder, Summer	$7,292,375	Shrimp, White	$8,571,111
4	Tunas	$4,092,985	Oysters	$4,889,703	Flounder, Summer	$6,893,316
5	Flounder, Summer	$3,753,492	Tunas	$3,440,754	Tunas	$4,332,426

	2017		2016		2015	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Shrimp, White	$20,628,755	Blue Crabs, Hard	$20,736,477	Blue Crabs, Hard	$29,606,587
2	Blue Crabs, Hard	$17,767,012	Shrimp, White	$19,728,491	Shrimp, Brown	$10,513,252
3	Shrimp, Brown	$8,536,519	Shrimp, Brown	$8,386,288	Flounder, Summer	$9,092,495
4	Flounder, Summer	$6,315,997	Flounder, Summer	$8,238,710	Shrimp, White	$6,228,725
5	Flounder, Southern	$5,656,948	Oysters	$4,059,849	Clams, Hard	$5,038,973

	2014		2013		2012	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	$29,954,723	Blue Crabs, Hard	$30,006,447	Blue Crabs, Hard	$22,806,938
2	Shrimp, Brown	$10,326,997	Shrimp, White	$6,344,881	Shrimp, Brown	$7,721,355
3	Flounder, Summer	$8,225,282	Shrimp, Brown	$6,021,373	Flounder, Southern	$4,451,482
4	Flounder, Southern	$4,839,672	Oysters	$3,353,126	Tunas	$4,413,829
5	Oysters	$4,544,236	Clams, Hard	$2,295,366	Shrimp, White	$3,913,604

Table VI.2 Top five commercial non-finfish species ranked by ex-vessel value of landings.

	2020		2019		2018	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	$19,096,437	Blue Crabs, Hard	$22,194,103	Blue Crabs, Hard	$17,296,000
2	Shrimp, White	$18,772,577	Shrimp, White	$18,878,990	Shrimp, Brown	$11,198,994
3	Oysters	$4,551,576	Oysters	$4,889,703	Shrimp, White	$8,571,111
4	Shrimp, Brown	$3,340,459	Shrimp, Brown	$2,964,476	Oysters	$3,897,568
5	Clams, Hard	$901,532	Blue Crabs, Peeler	$1,237,027	Clams, Hard	$1,628,664

	2017		2016		2015	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Shrimp, White	$20,628,755	Blue Crabs, Hard	$20,736,477	Blue Crabs, Hard	$29,606,587
2	Blue Crabs, Hard	$17,767,012	Shrimp, White	$19,728,491	Shrimp, Brown	$10,513,252
3	Shrimp, Brown	$8,536,519	Shrimp, Brown	$8,386,288	Shrimp, White	$6,228,725
4	Oysters	$5,590,559	Oysters	$4,059,849	Clams, Hard	$5,038,973
5	Blue Crabs, Soft	$2,791,960	Clams, Hard	$2,578,120	Oysters	$3,911,399

	2014		2013		2012	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	$29,954,723	Blue Crabs, Hard	$30,006,447	Blue Crabs, Hard	$22,806,938
2	Shrimp, Brown	$10,326,997	Shrimp, White	$6,344,881	Shrimp, Brown	$7,721,355
3	Oysters	$4,544,236	Shrimp, Brown	$6,021,373	Shrimp, White	$3,913,604
4	Shrimp, White	$3,483,015	Oysters	$3,353,126	Oysters	$2,572,073
5	Clams, Hard	$2,866,096	Clams, Hard	$2,295,366	Clams, Hard	$2,091,067

Table VI.3 Top five commercial finfish species ranked by ex-vessel value of landings.

	2020		2019		2018	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Tunas	$4,092,985	Flounder, Summer	$7,292,375	Flounder, Summer	$6,893,316
2	Flounder, Summer	$3,753,492	Tunas	$3,440,754	Tunas	$4,332,426
3	Mackerel, Spanish	$1,479,823	Flounder, Southern	$3,077,470	Flounder, Southern	$3,822,575
4	Mackerel, King	$1,467,862	Mackerel, King	$1,570,680	Croaker, Atlantic	$1,631,494
5	Kingfishes	$1,443,039	Snappers	$1,566,839	Sea Basses	$1,518,224

	2017		2016		2015	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Flounder, Summer	$6,315,997	Flounder, Summer	$8,238,710	Flounder, Summer	$9,092,495
2	Flounder, Southern	$5,656,948	Flounder, Southern	$3,618,196	Flounder, Southern	$3,823,788
3	Tunas	$5,091,809	Tunas	$3,220,820	Tunas	$2,916,057
4	Sea Basses	$1,862,633	Croaker, Atlantic	$2,216,211	Croaker, Atlantic	$1,646,350
5	Mackerel, Spanish	$1,384,543	Sea Basses	$1,346,245	Sea Basses	$1,366,822

	2014		2013		2012	
Rank	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Flounder, Summer	$8,225,282	Flounder, Southern	$5,673,190	Flounder, Southern	$4,451,482
2	Flounder, Southern	$4,839,672	Tunas	$3,226,483	Tunas	$4,413,829
3	Tunas	$3,647,436	Swordfish	$2,935,940	Swordfish	$3,009,107
4	Swordfish	$2,109,549	Croaker, Atlantic	$1,723,578	Flounder, Summer	$2,969,370
5	Croaker, Atlantic	$1,865,595	Mullet, Striped	$1,402,914	Croaker, Atlantic	$2,135,458

Table VI.4 Top five commercial gears ranked by ex-vessel value of landings.

	2020		2019		2018	
Rank	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Shrimp Trawl	$21,373,994	Crab Pot	$22,754,034	Shrimp Trawl	$19,463,592
2	Crab Pot	$19,540,527	Shrimp Trawl	$21,560,762	Crab Pot	$17,817,831
3	Gill net (anchored)	$6,898,480	Flounder Trawl	$8,234,946	Flounder Trawl	$7,988,145
4	Longline	$4,535,465	Gill net (anchored)	$7,217,753	Gill net (anchored)	$7,589,088
5	Flounder Trawl	$4,316,834	Longline	$4,125,185	Longline	$4,486,112

	2017		2016		2015	
Rank	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Shrimp Trawl	$28,606,820	Shrimp Trawl	$27,247,747	Crab Pot	$30,438,526
2	Crab Pot	$18,259,177	Crab Pot	$21,601,237	Shrimp Trawl	$16,216,651
3	Gill net (anchored)	$9,257,123	Flounder Trawl	$9,096,175	Flounder Trawl	$10,047,329
4	Flounder Trawl	$7,681,131	Gill net (anchored)	$8,680,162	Gill net (anchored)	$8,065,726
5	Longline	$5,404,330	Longline	$4,975,314	Longline	$4,715,705

	2014		2013		2012	
Rank	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Crab Pot	$31,254,009	Crab Pot	$28,075,766	Crab Pot	$21,550,133
2	Shrimp Trawl	$13,815,472	Shrimp Trawl	$12,001,423	Shrimp Trawl	$12,525,239
3	Gill net (anchored)	$9,438,932	Gill net (anchored)	$10,335,085	Gill net (anchored)	$9,644,112
4	Flounder Trawl	$9,016,925	Longline	$6,414,836	Longline	$7,600,518
5	Longline	$6,706,582	Rod-N-Reel	$3,134,644	Rod-N-Reel	$3,748,615

Table VI.5 Top five North Carolina counties ranked by ex-vessel value of commercial landings.

	2020		2019		2018	
Rank	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	$18,790,755	Dare	$19,822,344	Dare	$19,280,585
2	Carteret	$16,834,239	Carteret	$18,636,908	Carteret	$16,589,911
3	Pamlico	$9,007,195	Hyde	$9,182,132	Hyde	$10,815,091
4	Hyde	$8,211,441	Pamlico	$8,948,624	Pamlico	$8,051,828
5	Onslow	$3,534,785	Onslow	$5,271,885	Onslow	$3,580,125

	2017		2016		2015	
Rank	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	$23,683,159	Dare	$21,279,105	Dare	$20,975,467
2	Carteret	$20,662,095	Carteret	$18,222,596	Carteret	$18,305,211
3	Hyde	$12,811,250	Hyde	$12,860,060	Hyde	$10,980,166
4	Pamlico	$9,836,132	Pamlico	$10,561,218	Pamlico	$8,478,567
5	Onslow	$5,792,909	Onslow	$6,558,833	Onslow	$6,019,544

	2014		2013		2012	
Rank	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	$26,596,445	Dare	$21,313,461	Dare	$21,073,926
2	Carteret	$14,583,443	Carteret	$11,662,006	Carteret	$11,227,322
3	Hyde	$10,352,880	Hyde	$7,376,227	Hyde	$7,978,893
4	Pamlico	$6,465,954	Camden	$5,870,240	Pamlico	$4,620,865
5	Camden	$6,087,926	Tyrrell	$4,724,874	Onslow	$4,583,456

Table VI.6 Top five North Carolina ports ranked by ex-vessel value of commercial landings.

Rank	2020 Port	2020 Ex-Vessel Value	2019 Port	2019 Ex-Vessel Value	2018 Port	2018 Ex-Vessel Value
1	Morehead City/Beaufort	$13,060,665	Morehead City/Beaufort	$14,229,673	Morehead City/Beaufort	$13,043,235
2	Wanchese	$12,106,506	Wanchese	$12,000,916	Wanchese	$12,085,504
3	Oriental	$5,261,704	Engelhard	$5,146,984	Engelhard	$5,821,504
4	Engelhard	$4,966,807	Oriental	$4,916,343	Oriental	$4,676,438
5	Hatteras Island	$3,300,542	Sneads Ferry	$4,522,232	Swan Quarter	$4,015,823

Rank	2017 Port	2017 Ex-Vessel Value	2016 Port	2016 Ex-Vessel Value	2015 Port	2015 Ex-Vessel Value
1	Wanchese	$16,253,538	Wanchese	$14,724,895	Morehead City/Beaufort	$14,187,831
2	Morehead City/Beaufort	$15,951,459	Morehead City/Beaufort	$14,486,751	Wanchese	$13,325,325
3	Engelhard	$7,611,885	Engelhard	$7,505,492	Engelhard	$6,710,760
4	Sneads Ferry	$4,796,742	Sneads Ferry	$5,244,145	Shiloh	$5,343,108
5	Oriental	$4,647,158	Hobucken/Lowland	$4,691,929	Columbia	$4,922,453

Rank	2014 Port	2014 Ex-Vessel Value	2013 Port	2013 Ex-Vessel Value	2012 Port	2012 Ex-Vessel Value
1	Wanchese	$17,012,857	Wanchese	$13,391,895	Wanchese	$14,869,154
2	Morehead City/Beaufort	$10,721,496	Morehead City/Beaufort	$7,397,030	Morehead City/Beaufort	$7,342,879
3	Engelhard	$6,750,471	Shiloh	$5,870,240	Engelhard	$4,742,988
4	Shiloh	$6,079,732	Columbia	$4,724,874	Shiloh	$4,330,807
5	Columbia	$4,727,104	Engelhard	$4,500,433	Hatteras Island	$3,475,569

Table VI.7 Number of commercial fishing participants by range of ex-vessel value of seafood landed.

	2020		2019	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	354	$76,559	406	$86,528
$500-$999	154	$115,386	170	$122,921
$1,000-$4,999	531	$1,348,068	584	$1,490,806
$5,000-$9,999	293	$2,088,400	282	$2,035,908
$10,000-$24,999	371	$5,925,539	387	$6,256,234
$25,000-$49,999	253	$9,141,064	262	$9,364,788
$50,000-$99,999	186	$13,595,489	195	$14,310,397
$100,000-$249,999	149	$22,202,318	190	$28,823,274
$250,000-$499,999	42	$14,980,507	47	$15,897,834
Over $500,000	12	$7,975,198	12	$8,244,145
Total	2,345	$77,448,527	2,535	$86,632,835

	2018		2017	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	446	$91,842	470	$98,587
$500-$999	218	$158,134	227	$166,251
$1,000-$4,999	576	$1,509,756	649	$1,694,390
$5,000-$9,999	312	$2,230,003	337	$2,469,292
$10,000-$24,999	403	$6,652,199	474	$7,741,548
$25,000-$49,999	235	$8,325,330	294	$10,523,339
$50,000-$99,999	259	$18,340,942	247	$18,008,827
$100,000-$249,999	154	$22,789,202	178	$26,559,273
$250,000-$499,999	44	$14,941,702	52	$17,628,847
Over $500,000	4	$2,859,715	17	$11,703,358
Total	2,651	$77,898,825	2,945	$96,593,712

	2016		2015	
Range of Ex-Vessel Value	Participants	Total Value	Participants	Total Value
$1-$499	475	$102,098	528	$113,804
$500-$999	221	$158,178	279	$202,711
$1,000-$4,999	664	$1,722,376	701	$1,782,328
$5,000-$9,999	363	$2,604,829	326	$2,368,502
$10,000-$24,999	457	$7,293,014	462	$7,627,853
$25,000-$49,999	316	$11,211,651	314	$11,150,863
$50,000-$99,999	232	$16,829,501	255	$17,743,811
$100,000-$249,999	191	$28,511,515	217	$32,346,219
$250,000-$499,999	39	$13,409,334	42	$13,419,995
Over $500,000	16	$12,281,260	12	$7,966,309
Total	2,974	$94,123,755	3,136	$94,722,394

Table VI.7 Number of commercial fishing participants by range of ex-vessel value of seafood landed *(continued)*.

Range of Ex-Vessel Value	2014		2013	
	Participants	Total Value	Participants	Total Value
$1-$499	601	$122,308	603	$122,802
$500-$999	242	$174,569	266	$192,033
$1,000-$4,999	732	$1,859,711	710	$1,846,711
$5,000-$9,999	351	$2,555,380	364	$2,621,547
$10,000-$24,999	439	$7,204,381	437	$7,171,606
$25,000-$49,999	308	$10,999,495	337	$11,884,546
$50,000-$99,999	240	$17,372,562	229	$16,368,845
$100,000-$249,999	204	$30,555,946	167	$25,479,283
$250,000-$499,999	46	$15,461,200	35	$10,975,611
Over $500,000	11	$7,804,722	3	$2,440,694
Total	3,174	$94,110,276	3,151	$79,103,678

Range of Ex-Vessel Value	2012		2011	
	Participants	Total Value	Participants	Total Value
$1-$499	667	$135,093	716	$145,068
$500-$999	244	$180,865	261	$189,378
$1,000-$4,999	760	$1,927,886	761	$1,955,307
$5,000-$9,999	370	$2,673,233	344	$2,419,812
$10,000-$24,999	430	$6,995,774	465	$7,448,284
$25,000-$49,999	293	$10,533,771	290	$10,215,529
$50,000-$99,999	220	$15,220,473	238	$17,033,726
$100,000-$249,999	149	$21,646,334	140	$20,797,393
$250,000-$499,999	31	$9,770,831	26	$9,078,159
Over $500,000	5	$3,486,833	3	$1,901,352
Total	3,169	$72,571,092	3,244	$71,184,008

Range of Ex-Vessel Value	2010		2009	
	Participants	Total Value	Participants	Total Value
$1-$499	856	$168,504	894	$168,722
$500-$999	309	$226,453	343	$250,123
$1,000-$4,999	768	$1,971,177	857	$2,212,871
$5,000-$9,999	396	$2,770,755	414	$2,971,334
$10,000-$24,999	475	$7,700,522	524	$8,463,374
$25,000-$49,999	323	$11,515,814	308	$10,859,195
$50,000-$99,999	281	$20,354,586	224	$15,970,554
$100,000-$249,999	160	$23,083,296	162	$23,425,162
$250,000-$499,999	25	$8,490,881	23	$7,430,468
Over $500,000	5	$3,584,743	7	$5,444,176
Total	3,598	$79,866,731	3,756	$77,195,980

Table VI.7 Number of commercial fishing participants by range of ex-vessel value of seafood landed *(continued)*.

Range of Ex-Vessel Value	2008		2007	
	Participants	Total Value	Participants	Total Value
$1-$499	881	$165,245	866	$167,992
$500-$999	316	$228,299	311	$223,218
$1,000-$4,999	834	$2,126,719	912	$2,246,134
$5,000-$9,999	355	$2,559,749	381	$2,723,610
$10,000-$24,999	495	$7,901,800	509	$8,097,533
$25,000-$49,999	321	$11,462,835	337	$11,855,081
$50,000-$99,999	240	$17,103,112	225	$16,014,561
$100,000-$249,999	187	$29,339,527	158	$23,632,671
$250,000-$499,999	26	$8,841,946	36	$12,257,611
Over $500,000	9	$7,080,472	7	$5,065,131
Total	3,664	$86,809,702	3,742	$82,283,541

Range of Ex-Vessel Value	2006		2005	
	Participants	Total Value	Participants	Total Value
$1-$499	776	$154,071	844	$177,473
$500-$999	329	$235,511	361	$265,659
$1,000-$4,999	883	$2,218,834	977	$2,519,273
$5,000-$9,999	402	$2,848,520	454	$3,267,100
$10,000-$24,999	542	$8,997,385	582	$9,513,054
$25,000-$49,999	329	$11,733,036	348	$12,084,313
$50,000-$99,999	196	$13,688,760	215	$14,809,717
$100,000-$249,999	113	$16,218,470	93	$13,421,323
$250,000-$499,999	29	$9,332,685	16	$4,993,553
Over $500,000	7	$4,658,049	5	$3,836,941
Total	3,606	$70,085,319	3,895	$64,888,407

Range of Ex-Vessel Value	2004		2003	
	Participants	Total Value	Participants	Total Value
$1-$499	919	$176,687	1,021	$189,284
$500-$999	353	$255,791	369	$264,132
$1,000-$4,999	1,004	$2,575,234	922	$2,334,153
$5,000-$9,999	468	$3,301,378	456	$3,319,208
$10,000-$24,999	708	$11,496,009	677	$11,112,276
$25,000-$49,999	424	$14,840,589	412	$14,764,643
$50,000-$99,999	253	$17,008,833	327	$22,330,859
$100,000-$249,999	106	$15,818,767	154	$22,757,594
$250,000-$499,999	20	$6,526,428	12	$3,928,698
Over $500,000	7	$7,705,359	5	$6,111,985
Total	4,262	$79,705,074	4,355	$87,112,832

Table VI.7 Number of commercial fishing participants by range of ex-vessel value of seafood landed *(continued)*.

Range of Ex-Vessel Value	2002		2001	
	Participants	Total Value	Participants	Total Value
$1-$499	1,121	$211,511	1,242	$234,705
$500-$999	387	$279,368	444	$322,809
$1,000-$4,999	1,045	$2,644,370	1,140	$2,903,186
$5,000-$9,999	483	$3,458,734	559	$4,081,069
$10,000-$24,999	689	$10,918,732	726	$11,801,269
$25,000-$49,999	444	$15,953,833	508	$17,971,103
$50,000-$99,999	338	$23,561,411	312	$21,703,642
$100,000-$249,999	160	$23,278,020	133	$18,705,764
$250,000-$499,999	22	$6,837,287	12	$3,958,968
Over $500,000	5	$7,604,274	5	$6,459,596
Total	4,694	$94,747,541	5,081	$88,142,112

Range of Ex-Vessel Value	2000		1999	
	Participants	Total Value	Participants	Total Value
$1-$499	1,157	$219,789	1,193	$221,957
$500-$999	419	$301,087	411	$301,503
$1,000-$4,999	1,055	$2,697,402	1,035	$2,582,818
$5,000-$9,999	523	$3,781,356	481	$3,478,269
$10,000-$24,999	726	$11,971,752	749	$12,375,062
$25,000-$49,999	571	$20,071,536	523	$18,535,309
$50,000-$99,999	357	$24,705,032	289	$19,816,325
$100,000-$249,999	189	$26,971,373	133	$18,427,867
$250,000-$499,999	29	$9,203,909	16	$5,306,893
Over $500,000	8	$8,391,575	4	$18,633,608
Total	5,034	$108,314,811	4,834	$99,679,612

Range of Ex-Vessel Value	1998		1997	
	Participants	Total Value	Participants	Total Value
$1-$499	1,042	$205,653	1,208	$225,438
$500-$999	405	$289,624	414	$299,703
$1,000-$4,999	993	$2,562,963	1,115	$2,876,900
$5,000-$9,999	490	$3,569,211	548	$3,997,239
$10,000-$24,999	738	$12,368,272	856	$14,128,405
$25,000-$49,999	524	$18,980,608	576	$20,603,700
$50,000-$99,999	347	$23,763,125	305	$20,720,739
$100,000-$249,999	138	$18,962,973	118	$16,741,568
$250,000-$499,999	8	$2,672,040	14	$4,418,969
Over $500,000	3	$17,644,065	6	$24,975,456
Total	4,688	$101,018,535	5,160	$108,988,117

Table VI.7 Number of commercial fishing participants by range of ex-vessel value of seafood landed *(continued)*.

Range of Ex-Vessel Value	1996		1995	
	Participants	Total Value	Participants	Total Value
$1-$499	1,208	$227,526	1,258	$246,059
$500-$999	407	$296,571	440	$326,253
$1,000-$4,999	1,143	$2,874,042	1,259	$3,252,153
$5,000-$9,999	590	$4,338,034	624	$4,619,448
$10,000-$24,999	829	$13,736,281	877	$14,378,075
$25,000-$49,999	564	$19,815,555	542	$19,472,751
$50,000-$99,999	335	$23,189,379	337	$23,271,907
$100,000-$249,999	116	$16,547,993	133	$18,905,145
$250,000-$499,999	10	$2,975,607	17	$5,803,214
Over $500,000	5	$21,532,505	7	$19,092,944
Total	5,207	$105,533,493	5,494	$109,367,950

Range of Ex-Vessel Value	1994	
	Participants	Total Value
$1-$499	1,346	$254,460
$500-$999	445	$323,517
$1,000-$4,999	1,322	$3,341,972
$5,000-$9,999	635	$4,608,616
$10,000-$24,999	784	$12,684,774
$25,000-$49,999	443	$15,273,291
$50,000-$99,999	244	$16,998,346
$100,000-$249,999	75	$10,354,865
$250,000-$499,999	16	$4,776,628
Over $500,000	7	$22,659,401
Total	5,317	$91,275,869

Table VI.8 Number of commercial seafood dealers by range of ex-vessel value of seafood.

	2020		2019	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	38	$8,357	44	$10,293
$500-$999	34	$24,850	25	$18,678
$1,000-$4,999	104	$277,443	103	$282,767
$5,000-$9,999	66	$470,975	68	$509,044
$10,000-$24,999	86	$1,283,273	91	$1,491,117
$25,000-$49,999	45	$1,614,126	39	$1,305,716
$50,000-$99,999	47	$3,367,630	43	$3,093,337
$100,000-$249,999	52	$8,455,366	53	$8,447,774
$250,000-$499,999	21	$7,295,532	23	$7,674,302
$500,000-$999,999	22	$15,372,070	23	$16,648,673
Over $1,000,000	16	$39,278,905	20	$47,151,134
Total	532	$77,448,527	532	$86,632,835

	2018		2017	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	53	$13,149	40	$8,196
$500-$999	27	$20,362	24	$17,061
$1,000-$4,999	123	$334,613	106	$274,775
$5,000-$9,999	79	$584,979	60	$438,442
$10,000-$24,999	85	$1,356,174	103	$1,688,482
$25,000-$49,999	36	$1,345,204	43	$1,555,528
$50,000-$99,999	39	$2,745,760	42	$2,985,671
$100,000-$249,999	45	$7,189,470	44	$6,967,251
$250,000-$499,999	24	$8,389,180	27	$9,630,404
$500,000-$999,999	17	$11,850,125	20	$14,464,953
Over $1,000,000	19	$44,069,809	23	$58,562,948
Total	547	$77,898,825	532	$96,593,712

	2016		2015	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	54	$12,224	53	$11,104
$500-$999	26	$18,847	44	$32,034
$1,000-$4,999	110	$291,129	114	$291,595
$5,000-$9,999	73	$516,675	69	$490,788
$10,000-$24,999	102	$1,692,885	101	$1,633,264
$25,000-$49,999	62	$2,283,578	64	$2,163,205
$50,000-$99,999	36	$2,554,458	48	$3,169,827
$100,000-$249,999	47	$7,245,656	49	$7,950,300
$250,000-$499,999	23	$8,442,666	22	$7,849,595
$500,000-$999,999	22	$15,873,692	23	$16,071,128
Over $1,000,000	20	$55,191,945	23	$55,059,553
Total	575	$94,123,755	610	$94,722,394

Table VI.8 **Number of commercial seafood dealers by range of ex-vessel value of seafood (*continued).***

Range of Ex-Vessel Value	2014		2013	
	Dealers	Total Value	Dealers	Total Value
$1-$499	65	$11,755	62	$12,864
$500-$999	45	$32,562	42	$31,582
$1,000-$4,999	124	$324,035	140	$377,346
$5,000-$9,999	68	$506,777	68	$496,801
$10,000-$24,999	94	$1,528,615	103	$1,693,114
$25,000-$49,999	60	$2,221,634	56	$2,040,555
$50,000-$99,999	40	$2,928,728	26	$1,893,795
$100,000-$249,999	39	$6,252,184	53	$9,119,956
$250,000-$499,999	29	$10,007,367	24	$8,596,165
$500,000-$999,999	18	$13,021,607	18	$12,687,877
Over $1,000,000	24	$57,275,012	20	$42,153,622
Total	606	$94,110,276	612	$79,103,678

Range of Ex-Vessel Value	2012		2011	
	Dealers	Total Value	Dealers	Total Value
$1-$499	65	$16,186	84	$20,508
$500-$999	50	$36,539	36	$27,660
$1,000-$4,999	135	$339,651	154	$386,944
$5,000-$9,999	86	$624,914	79	$577,880
$10,000-$24,999	108	$1,777,895	104	$1,703,113
$25,000-$49,999	46	$1,579,102	49	$1,633,912
$50,000-$99,999	35	$2,625,885	36	$2,561,811
$100,000-$249,999	44	$7,597,981	36	$5,530,747
$250,000-$499,999	25	$9,222,944	25	$8,958,433
$500,000-$999,999	18	$12,885,904	21	$14,533,737
Over $1,000,000	17	$35,864,089	18	$35,249,265
Total	629	$72,571,092	642	$71,184,008

Range of Ex-Vessel Value	2010		2009	
	Dealers	Total Value	Dealers	Total Value
$1-$499	83	$18,058	82	$18,276
$500-$999	41	$30,342	51	$36,571
$1,000-$4,999	141	$366,850	168	$411,392
$5,000-$9,999	84	$627,673	84	$628,715
$10,000-$24,999	106	$1,707,961	95	$1,505,021
$25,000-$49,999	55	$1,961,107	50	$1,738,346
$50,000-$99,999	44	$3,037,290	37	$2,660,711
$100,000-$249,999	36	$5,487,224	46	$7,864,114
$250,000-$499,999	31	$11,133,355	34	$12,404,263
$500,000-$999,999	25	$17,348,494	16	$10,667,814
Over $1,000,000	17	$38,148,378	20	$39,260,757
Total	663	$79,866,731	683	$77,195,980

Table VI.8 **Number of commercial seafood dealers by range of ex-vessel value of seafood *(continued).***

	2008		2007	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	67	$14,614	63	$14,338
$500-$999	39	$29,073	48	$34,759
$1,000-$4,999	144	$383,600	123	$309,363
$5,000-$9,999	61	$432,423	68	$492,135
$10,000-$24,999	98	$1,589,894	95	$1,560,621
$25,000-$49,999	44	$1,590,093	52	$1,868,251
$50,000-$99,999	36	$2,561,874	42	$2,862,363
$100,000-$249,999	45	$7,203,828	42	$6,830,952
$250,000-$499,999	29	$10,495,107	30	$10,937,353
$500,000-$999,999	26	$18,524,021	24	$15,421,256
Over $1,000,000	20	$43,985,176	19	$41,952,149
Total	609	$86,809,702	606	$82,283,541

	2006		2005	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	54	$11,992	74	$17,215
$500-$999	46	$34,228	47	$34,752
$1,000-$4,999	126	$334,759	136	$342,364
$5,000-$9,999	60	$409,937	77	$568,141
$10,000-$24,999	107	$1,769,478	90	$1,466,394
$25,000-$49,999	65	$2,352,645	55	$1,871,706
$50,000-$99,999	42	$2,984,499	51	$3,459,194
$100,000-$249,999	33	$5,489,874	40	$6,904,704
$250,000-$499,999	36	$12,365,749	36	$12,135,554
$500,000-$999,999	20	$13,191,023	23	$16,345,574
Over $1,000,000	14	$31,141,134	11	$21,742,810
Total	603	$70,085,319	640	$64,888,407

	2004		2003	
Range of Ex-Vessel Value	Dealers	Total Value	Dealers	Total Value
$1-$499	83	$18,051	74	$15,760
$500-$999	36	$26,008	37	$27,208
$1,000-$4,999	160	$426,929	155	$399,175
$5,000-$9,999	76	$554,507	94	$707,812
$10,000-$24,999	115	$1,866,119	94	$1,547,430
$25,000-$49,999	57	$1,983,520	72	$2,525,650
$50,000-$99,999	44	$2,989,955	49	$3,640,869
$100,000-$249,999	51	$8,780,408	60	$9,950,339
$250,000-$499,999	41	$14,335,665	31	$10,595,848
$500,000-$999,999	23	$16,025,280	32	$22,723,602
Over $1,000,000	15	$32,698,633	18	$34,979,137
Total	701	$79,705,074	716	$87,112,832

Table VI.8 Number of commercial seafood dealers by range of ex-vessel value of seafood *(continued).*

Range of Ex-Vessel Value	2002		2001	
	Dealers	Total Value	Dealers	Total Value
$1-$499	81	$16,810	86	$18,277
$500-$999	49	$36,215	48	$36,258
$1,000-$4,999	164	$416,709	143	$326,253
$5,000-$9,999	84	$597,629	82	$601,736
$10,000-$24,999	89	$1,460,870	85	$1,466,458
$25,000-$49,999	77	$2,720,825	72	$2,502,610
$50,000-$99,999	41	$2,845,825	42	$2,898,177
$100,000-$249,999	49	$7,748,864	56	$9,218,425
$250,000-$499,999	35	$12,403,209	44	$15,013,452
$500,000-$999,999	36	$24,161,971	28	$20,175,082
Over $1,000,000	21	$42,338,613	20	$35,885,384
Total	726	$94,747,541	706	$88,142,112

Range of Ex-Vessel Value	2000		1999	
	Dealers	Total Value	Dealers	Total Value
$1-$499	71	$17,377	94	$21,477
$500-$999	52	$38,983	43	$31,480
$1,000-$4,999	130	$332,049	151	$394,619
$5,000-$9,999	86	$616,049	91	$667,243
$10,000-$24,999	87	$1,385,585	85	$1,442,144
$25,000-$49,999	61	$2,190,950	71	$2,570,883
$50,000-$99,999	50	$3,430,948	54	$3,899,416
$100,000-$249,999	66	$11,105,969	62	$9,849,972
$250,000-$499,999	28	$10,073,021	48	$17,356,410
$500,000-$999,999	38	$26,037,241	39	$27,071,047
Over $1,000,000	28	$53,086,638	22	$36,374,921
Total	697	$108,314,811	760	$99,679,612

Range of Ex-Vessel Value	1998		1997	
	Dealers	Total Value	Dealers	Total Value
$1-$499	93	$18,281	73	$15,316
$500-$999	47	$35,556	39	$28,463
$1,000-$4,999	154	$401,895	145	$376,363
$5,000-$9,999	64	$461,241	75	$552,589
$10,000-$24,999	95	$1,620,619	88	$1,476,779
$25,000-$49,999	61	$2,191,822	72	$2,474,940
$50,000-$99,999	59	$4,154,979	55	$3,935,810
$100,000-$249,999	56	$9,064,737	48	$7,598,762
$250,000-$499,999	48	$17,512,993	50	$18,194,258
$500,000-$999,999	34	$24,710,336	36	$24,425,559
Over $1,000,000	26	$40,846,077	27	$49,909,279
Total	737	$101,018,535	708	$108,988,117

Table VI.8 **Number of commercial seafood dealers by range of ex-vessel value of seafood *(continued).***

Range of Ex-Vessel Value	1996		1995	
	Dealers	Total Value	Dealers	Total Value
$1-$499	82	$16,595	112	$21,974
$500-$999	49	$36,150	42	$30,196
$1,000-$4,999	151	$409,797	157	$435,433
$5,000-$9,999	72	$502,989	73	$521,146
$10,000-$24,999	95	$1,489,305	61	$1,000,105
$25,000-$49,999	60	$2,161,251	65	$2,258,478
$50,000-$99,999	46	$3,228,174	43	$3,033,036
$100,000-$249,999	55	$9,111,449	59	$10,048,164
$250,000-$499,999	37	$13,773,845	42	$15,213,635
$500,000-$999,999	36	$26,776,573	37	$27,826,874
Over $1,000,000	30	$48,027,364	26	$48,978,910
Total	713	$105,533,493	717	$109,367,950

Range of Ex-Vessel Value	1994	
	Dealers	Total Value
$1-$499	89	$18,397
$500-$999	50	$35,522
$1,000-$4,999	137	$330,770
$5,000-$9,999	53	$385,533
$10,000-$24,999	49	$837,156
$25,000-$49,999	44	$1,471,274
$50,000-$99,999	36	$2,459,653
$100,000-$249,999	57	$9,333,833
$250,000-$499,999	45	$16,431,142
$500,000-$999,999	30	$21,127,090
Over $1,000,000	23	$38,845,499
Total	613	$91,275,869

Table VI.9 Economic impacts of commercial fishing in North Carolina over last 11 years, 2010-2020.

Year	Commercial Fishing Output[1]				Economic Impacts[2]		
	Commercial Fishermen	Dealers	Pounds	Ex-Vessel Value	Estimated Jobs[3]	Income Impacts (thousands of dollars)	Sales Impacts (thousands of dollars)
2020[4]	2,345	531	42,951,943	$77,448,527	-	-	-
2019	2,535	532	52,983,925	$86,632,835	7,239	$150,968,806	$342,104,459
2018	2,651	547	45,767,219	$77,898,825	7,203	$142,093,914	$321,948,200
2017	2,945	532	54,395,746	$96,593,712	7,828	$162,889,786	$369,034,567
2016	2,974	575	59,977,077	$94,123,755	7,754	$161,776,863	$359,572,628
2015	3,136	610	65,947,432	$94,722,394	8,212	$158,941,759	$363,850,851
2014	3,174	606	61,975,412	$94,110,276	8,200	$154,130,327	$354,148,195
2013	3,151	612	50,197,234	$79,103,678	7,382	$131,085,644	$300,978,769
2012	3,169	629	56,690,935	$72,571,092	7,026	$123,091,285	$282,242,234
2011	3,244	642	67,502,014	$71,184,008	7,012	$121,135,473	$278,029,666
2010	3,598	663	75,001,861	$79,866,731	7,872	$139,382,772	$319,511,350

[1]As reported by the NCDMF Trip Ticket Program.
[2]Economic impacts calculated using the NCDMF commercial fishing economic impact model and IMPLAN economic impact modeling software. Economic impact estimates are for the state economy of North Carolina.
[3]Represents both full-time and part-time jobs.
[4]2020 economic impacts could not be produced by NCDMF due to a vacancy in the Economist position.

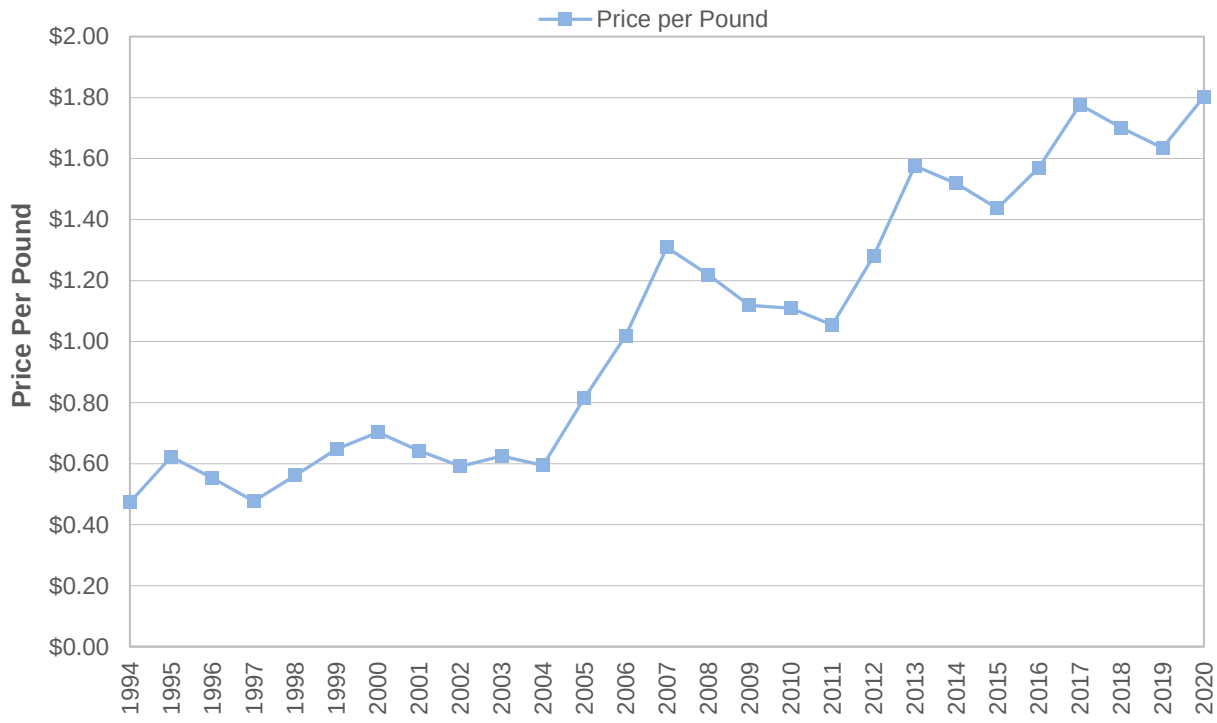


Figure VI.1 Average price per pound of annual commercial landings, converted to 2020 dollars.[1]

[1]Annual prices converted to 2020 dollars using Federal Reserve Bank of Minneapolis Consumer Price Index value.

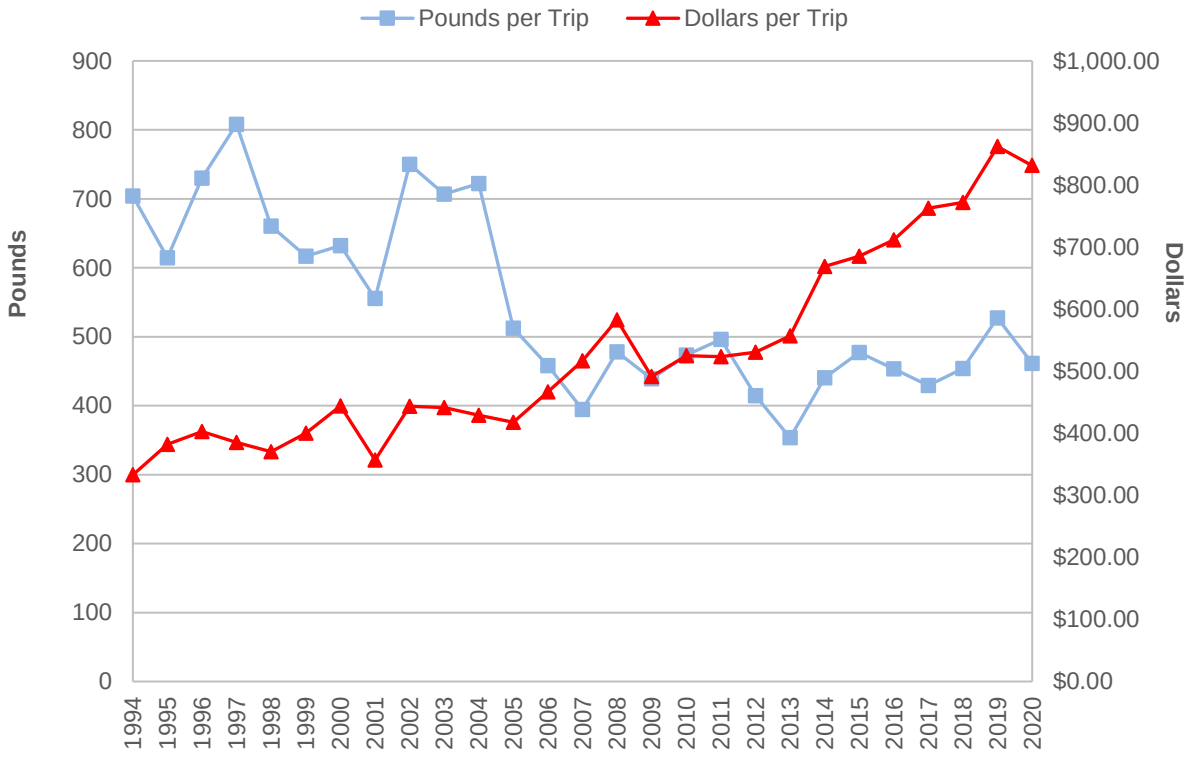


Figure VI.2 Commercial landings and ex-vessel value per fishing trip by year, 1994–2020.

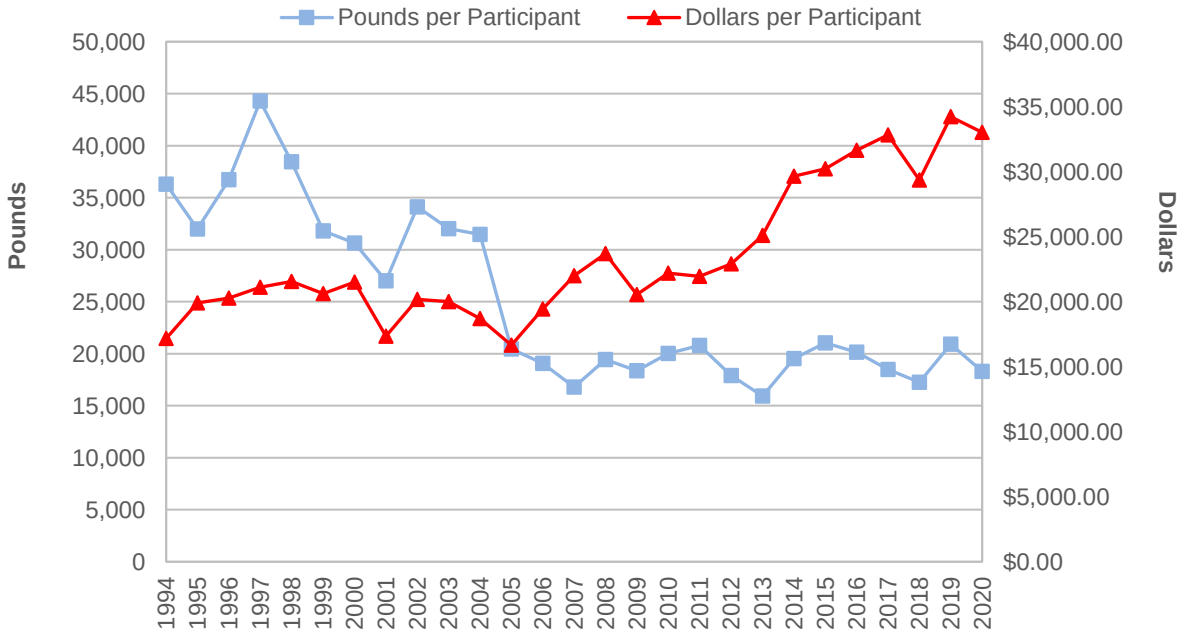


Figure VI.3 Commercial landings and ex-vessel value per participant by year, 1994–2020.

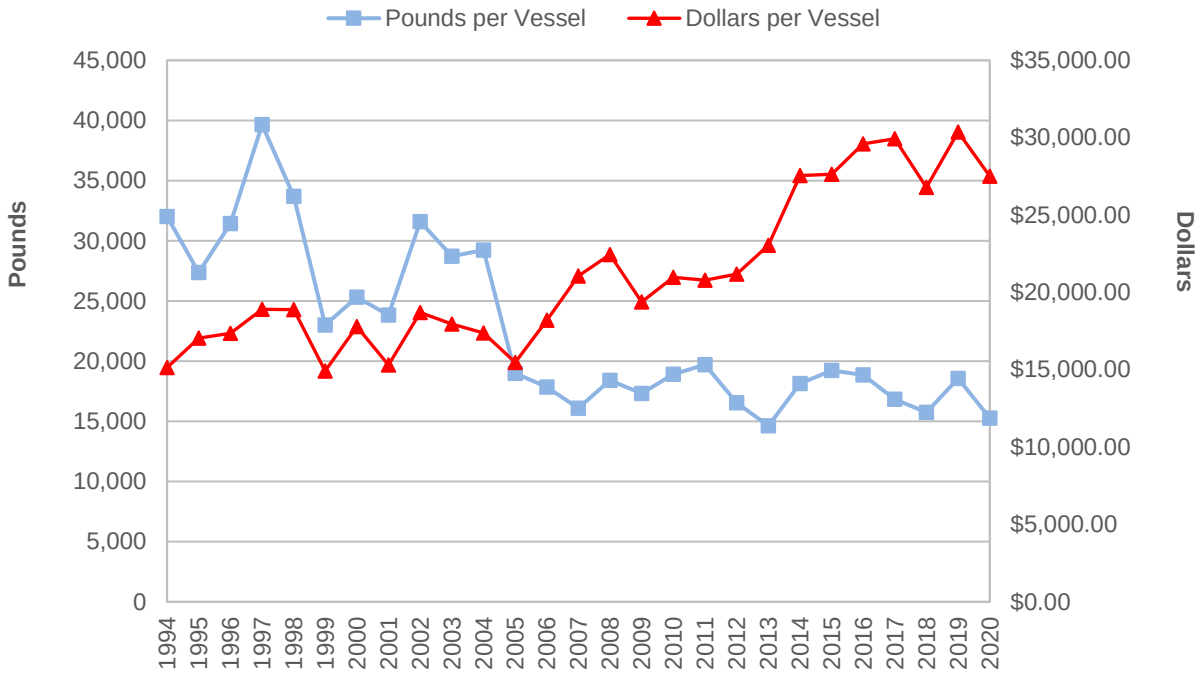


Figure VI.4 Commercial landings and ex-vessel value per vessel by year, 1994–2020.

Table VI.10 Top five recreational species by total directed and landed fishing trips.

	2020		2019		2018	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Drum, Red	3,263,904	Seatrout, Spotted	2,867,512	Drum, Red	3,478,377
2	Seatrout, Spotted	3,169,996	Bluefish	2,699,198	Bluefish	3,031,288
3	Bluefish	2,024,699	Drum, Red	2,687,752	Flounder	1,711,066
4	Kingfish	1,771,176	Kingfish	2,280,088	Kingfish	1,660,341
5	Flounder	1,675,588	Flounder	1,828,756	Seatrout, Spotted	1,606,853

	2017		2016		2015	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Drum, Red	3,674,352	Drum, Red	3,686,799	Bluefish	3,126,972
2	Bluefish	3,390,236	Bluefish	3,194,322	Kingfish	2,842,692
3	Seatrout, Spotted	2,851,053	Kingfish	2,741,476	Drum, Red	2,758,226
4	Kingfish	2,361,137	Flounder	2,420,326	Seatrout, Spotted	2,537,677
5	Flounder	2,107,301	Seatrout, Spotted	2,322,627	Flounder	2,536,854

	2014		2013		2012	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Drum, Red	2,995,433	Kingfish	2,910,094	Flounder	2,715,416
2	Bluefish	2,871,661	Bluefish	2,769,469	Kingfish	2,713,816
3	Flounder	2,685,072	Flounder	2,623,584	Drum, Red	2,557,094
4	Kingfish	2,538,697	Drum, Red	2,542,714	Seatrout, Spotted	2,365,291
5	Seatrout, Spotted	2,154,879	Spot	2,385,900	Bluefish	2,355,827

[1]Directed trip defined as fishing trip in which species was designated as primary or secondary target, or if the species was caught (including both harvest and discards).
[2]Pinfish have been removed from these rankings as they are a non-target recreational species.
[3]Lefteye-flounder genus, Kingfish genus, and Seatrout genus discards are each decomposed into constituent species by applying the ratio of observed harvest.

Table VI.11 Top five recreational species by total directed and landed fishing trips in estuarine waters.

	2020		2019		2018	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Seatrout, Spotted	2,723,059	Seatrout, Spotted	2,498,240	Seatrout, Spotted	1,050,588
2	Drum, Red	1,750,967	Drum, Red	1,364,573	Drum, Red	1.048,725
3	Flounder	1,078,300	Flounder	1,163,976	Flounder	989,030
4	Croaker, Atlantic	570,255	Bluefish	707,534	Bluefish	588,800
5	Bluefish	485,945	Croaker, Atlantic	643,412	Croaker, Atlantic	525,942

	2017		2016		2015	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Seatrout, Spotted	1,926,134	Seatrout, Spotted	1,668,906	Flounder	1,305,922
2	Drum, Red	1,391,701	Flounder	1,326,640	Croaker, Atlantic	1,078,329
3	Flounder	1,093,787	Drum, Red	1,080,444	Seatrout, Spotted	934,595
4	Sea Bass, Black	678,956	Croaker, Atlantic	746,234	Drum, Red	877,726
5	Croaker, Atlantic	614,956	Pigfish	598,902	Pigfish	643,935

	2014		2013	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Seatrout, Spotted	1,298,948	Seatrout, Spotted	1,758,243
2	Flounder	1,259,600	Flounder	1,355,349
3	Drum, Red	1,121,028	Drum, Red	1,180,553
4	Croaker, Atlantic	874,868	Croaker, Atlantic	643,229
5	Pigfish	522,315	Bluefish	446,427

[1]Directed trip defined as fishing trip in which species was designated as primary or secondary target, or if the species was caught (including both harvest and discards).
[2]Pinfish have been removed from these rankings as they are a non-target recreational species.
[3]Lefteye-flounder genus, Kingfish genus, and Seatrout genus discards are each decomposed into constituent species by applying the ratio of observed harvest.

Table VI.12 Top five recreational species by total directed and landed fishing trips in ocean waters 0-3 miles from shore.

	2020		2019		2018	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Bluefish	1,519,840	Bluefish	1,951,179	Drum, Red	2,426,857
2	Drum, Red	1,502,058	Kingfish	1,879,740	Bluefish	2,426,040
3	Kingfish	1,483,294	Drum, Red	1,316,760	Kingfish	1,430,778
4	Mackerel, Spanish	861,138	Mackerel, Spanish	1,058,290	Mackerel, Spanish	845,544
5	Flounder	561,501	Spot	685,267	Flounder	711,406

	2017		2016		2015	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Bluefish	2,893,889	Bluefish	2,721,663	Bluefish	2,462,803
2	Drum, Red	2,278,515	Drum, Red	2,605,528	Kingfish	2,457,751
3	Kingfish	2,064,896	Kingfish	2,312,446	Drum, Red	1,868,742
4	Spot	1,024,099	Flounder	1,079,109	Seatrout, Spotted	1,597,333
5	Flounder	996,260	Puffers	989,121	Spot	1,354,339

	2014		2013	
Rank	Species[2,3]	Directed Trips[1]	Species[2,3]	Directed Trips[1]
1	Bluefish	2,374,908	Kingfish	2,589,022
2	Kingfish	2,055,200	Bluefish	2,297,866
3	Drum, Red	1,785,654	Spot	2,036,197
4	Flounder	1,079,109	Drum, Red	1,359,939
5	Puffers	989,121	Flounder	1,245,327

[1]Directed trip defined as fishing trip in which species was designated as primary or secondary target, or if the species was caught (including both harvest and discards).
[2]Pinfish have been removed from these rankings as they are a non-target recreational species.
[3]Lefteye-flounder genus, Kingfish genus, and Seatrout genus discards are each decomposed into constituent species by applying the ratio of observed harvest.

Table VI.13 Top five recreational species by directed and landed fishing trips in ocean waters greater than 3 miles from shore.

	2020		2019		2018	
Rank	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]
1	Mackerel, King	204,219	Dolphin	166,429	Dolphin	238,032
2	Dolphin	132,578	Mackerel, King	145,351	Mackerel, King	138,980
3	Sea Bass, Black	122,504	Sea Bass, Black	79,181	Sea Bass, Black	106,091
4	Wahoo	73,107	Mackerel, Spanish	51,855	Mackerel, Spanish	66,025
5	Tuna, Yellowfin	68,502	Sharks	49,804	Tuna, Yellowfin	54,138

	2017		2016		2015	
Rank	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]
1	Dolphin	192,004	Dolphin	271,904	Dolphin	304,978
2	Sea Bass, Black	183,341	Tuna, Yellowfin	119,950	Sea Bass, Black	175,695
3	Mackerel. King	118,079	Sea Bass, Black	116,229	Mackerel, King	110,792
4	Tuna, Yellowfin	88,727	Wahoo	83,613	Wahoo	95,921
5	Wahoo	74,721	Mackerel, King	81,702	Mackerel, Spanish	72,406

	2014		2013	
Rank	Species[2]	Directed Trips[1]	Species[2]	Directed Trips[1]
1	Dolphin	167,903	Dolphin	189,628
2	Sea Bass, Black	141,025	Sea Bass, Black	113,512
3	Wahoo	70,998	Mackerel, King	109,099
4	Mackerel, King	69,677	Sharks	60,086
5	Sharks	49,052	Wahoo	47,999

[1]Directed trip defined as fishing trip in which species was designated as primary or secondary target, or if the species was caught (including both harvest and discards).
[2]Shark management groups (small coastal, large coastal, pelagic) have been combined for this ranking.

Table VI.14 Top five North Carolina counties ranked by the number of residents holding a Coastal Recreational Fishing License.

	2020		2019		2018	
Rank	County	License Holders	County	License Holders	County	License Holders
1	Wake	27,403	Wake	22,700	Wake	21,346
2	Onslow	19,308	Onslow	16,782	Onslow	14,938
3	New Hanover	16,154	New Hanover	14,115	New Hanover	13,203
4	Brunswick	11,573	Brunswick	10,646	Brunswick	9,677
5	Johnston	10,520	Carteret	9,811	Carteret	8,389

	2017		2016		2015	
Rank	County	License Holders	County	License Holders	County	License Holders
1	Wake	23,636	Wake	24,030	Wake	23,979
2	Onslow	17,202	Onslow	17,633	Onslow	18,497
3	New Hanover	15,090	New Hanover	15,036	New Hanover	16,042
4	Brunswick	10,791	Brunswick	10,643	Brunswick	11,050
5	Carteret	9,943	Carteret	10,109	Carteret	10,665

	2014		2013	
Rank	County	License Holders	County	License Holders
1	Wake	24,443	Wake	24,094
2	Onslow	18,766	Onslow	18,661
3	New Hanover	16,455	New Hanover	16,407
4	Brunswick	11,489	Brunswick	11,268
5	Carteret	11,187	Carteret	10,995

Table VI.15 Economic impacts of coastal recreational fishing in North Carolina over the last 12 years, 2009-2020.

Year	Recreational Fishing Output	Economic Impacts		
	Estimated Direct Expenditures (thousands of dollars)[3]	Estimated Jobs[2]	Income Impacts (thousands of dollars)[1]	Output Impacts (thousands of dollars)[1]
2020[4]	-	-	-	-
2019	$3,127,676	34,010	$1,417,400	$4,286,699
2018	$4,191,618	33,775	$1,282,873	$3,288,305
2017	$4,816,819	41,743	$1,486,882	$3,923,324
2016	$4,752,353	44,427	$1,532,898	$4,100,599
2015	$4,451,375	42,070	$1,437,513	$3,907,343
2014	$4,369,497	41,232	$1,409,580	$3,695,889
2013	$4,384,281	40,969	$1,379,945	$3,691,008
2012	$4,634,579	44,384	$1,472,235	$4,018,561
2011	$4,513,297	45,224	$1,448,130	$4,244,161
2010	$4,427,331	45,436	$1,416,279	$4,128,338
2009	$4,162,746	42,539	$1,309,432	$3,832,121

[1]Economic impacts calculated using the NCDMF coastal recreational fishing economic impact model and IMPLAN economic impact modeling software. Economic impact estimates are for the state economy of North Carolina.
[2]Includes full time and part time jobs.
[3]Estimated expenditures include both durable good expenditures and fishing trip expenditures.
[4]2020 economic impacts could not be produced by NCDMF due to a vacancy in the Economist position.

Table VI.16 **Economic impacts of recreational fishing in coastal river systems of the Central Southern Management Area (CSMA) in North Carolina.**

2020			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars) [4]	Output Impacts (thousands of dollars) [4]
Neuse River	153,744	-	-	-	-
Tar/Pamlico Rivers	278,145	-	-	-	-
Cape Fear River	4,974	-	-	-	-
Total	436,863	-	-	-	-

2019			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	257,484	$3,244	31	$1,288	$3,693
Tar/Pamlico Rivers	237,830	$3,395	30	$1,259	$3,617
Cape Fear River	7,956	$66	1	$13	$37
Total	503,270	$6,705	62	$2,560	$7,347

2018			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	162,742	$2,465	23	$874	$2,573
Tar/Pamlico Rivers	196,883	$2,557	20	$762	$2,203
Cape Fear River	24,642	$171	1	$28	$72
Total	384,267	$5,193	44	$16,663	$4,848

2017			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	270,485	$6,051	75	$2,665	$8,400
Tar/Pamlico Rivers	182,534	$4,674	51	$1,814	$5,616
Cape Fear River	11,057	$76	1	$12	$31
Total	464,076	$10,800	127	$4,491	$14,047

[1]Includes full time and part time jobs.
[2]Effort estimates as reported by the NCDMF Coastal Angling Program. Neuse and Tar/Pamlico River estimates include a full 12 months of effort, while effort estimates on the Cape Fear River are only available for March through May.
[3]Estimated fishing trip expenditures based on NCWRC CSMA creel surveys and NCDMF CSMA recreational fishing economic impact model.
[4]2020 economic impacts could not be produced by NCDMF due to a vacancy in the Economist position.

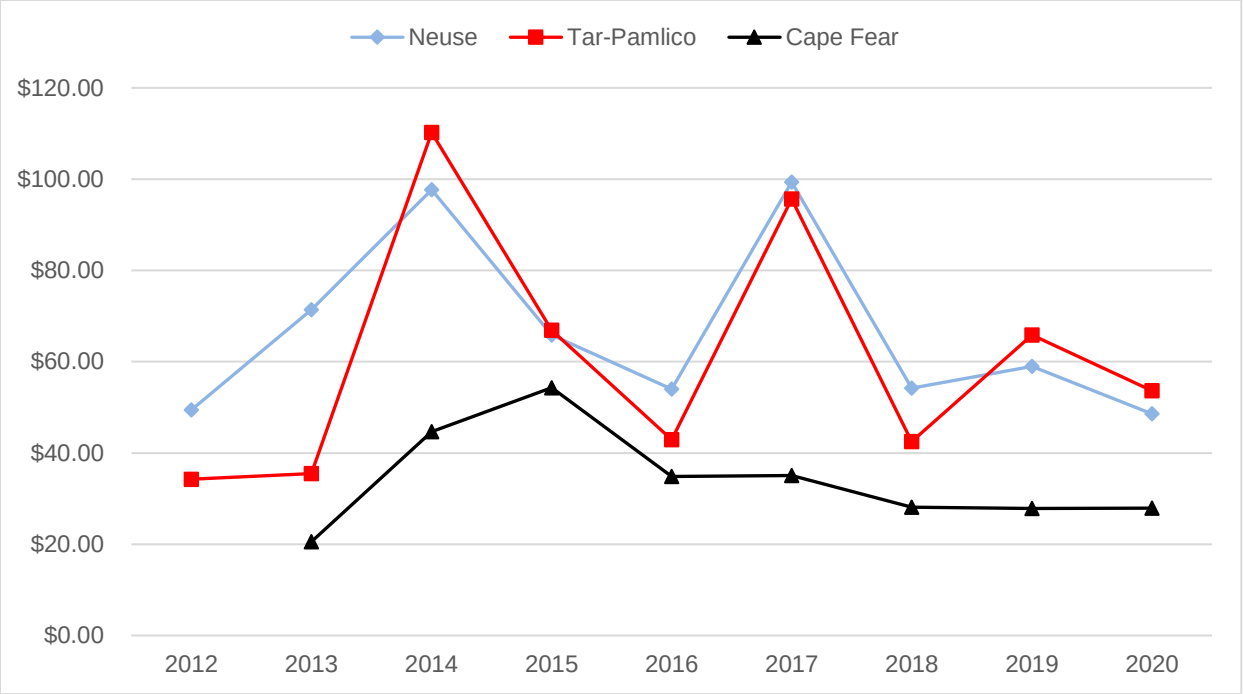
Table VI.16 Economic impacts of recreational fishing in coastal river systems of the Central Southern Management Area (CSMA) in North Carolina (*continued*).

2016			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	210,111	$1,176	17	$639	$1,954
Tar/Pamlico Rivers	245,998	$1,938	27	$1,033	$3,204
Cape Fear River	43,226	$346	5	$190	$578
Total	499,335	$3,460	49	$1,862	$5,736

2015			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	252,140	$1,004	6	$259	$592
Tar/Pamlico Rivers	184,333	$1,056	11	$450	$1,018
Cape Fear River	55,463	$275	3	$105	$249
Total	491,936	$2,335	20	$814	$1,859

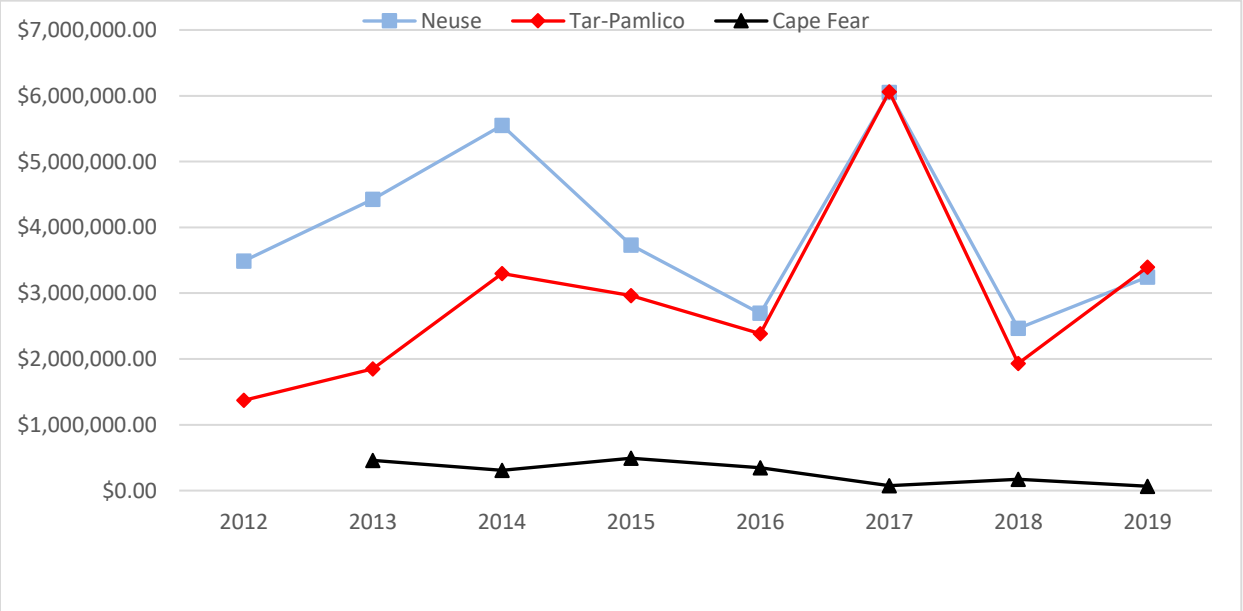
2014			Economic Impacts		
River System	Estimated Angler Hours[2]	Estimated Expenditures (thousands of dollars)[3]	Estimated Jobs[1]	Income Impacts (thousands of dollars)	Output Impacts (thousands of dollars)
Neuse River	215,956	$1,398	13	$522	$1,183
Tar/Pamlico Rivers	136,083	$956	8	$325	$742
Cape Fear River	28,852	$148	2	$69	$156
Total	380,892	$2,502	23	$916	$2,082

[1]Includes full time and part time jobs.
[2]Effort estimates as reported by the NCDMF Coastal Angling Program. Neuse and Tar/Pamlico River estimates include a full 12 months of effort, while effort estimates on the Cape Fear River are only available for March through May.
[3]Estimated fishing trip expenditures based on NCWRC CSMA creel surveys and NCDMF CSMA recreational fishing economic impact model.
[4]2020 economic impacts could not be produced by NCDMF due to a vacancy in the Economist position.



Note: Estimated fishing trip expenditures based on NCWRC CSMA creel surveys.
Expenditure estimates as reported by the NCDMF Coastal Angling Program. Average Neuse and Tar/Pamlico River expenditure estimates include a full 12 months of effort, while estimates on the Cape Fear River are only available for March through May.

Figure VI.5 Average recreational per-trip expenditures across creel survey river systems.



Note: Estimated fishing trip expenditures based on NCWRC CSMA creel surveys.
Expenditure estimates as reported by the NCDMF Coastal Angling Program. Average Neuse and Tar/Pamlico River expenditure estimates include a full 12 months of effort, while estimates on the Cape Fear River are only available for March through May.
*2020 economic impacts could not be produced by NCDMF due to a vacancy in the Economist position.

Figure VI.6 Total estimated recreational fishing expenditures across creel survey river systems.