

## Chapter VI: FISHERIES ECONOMICS

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## 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 survey have 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.

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## CONTACTS

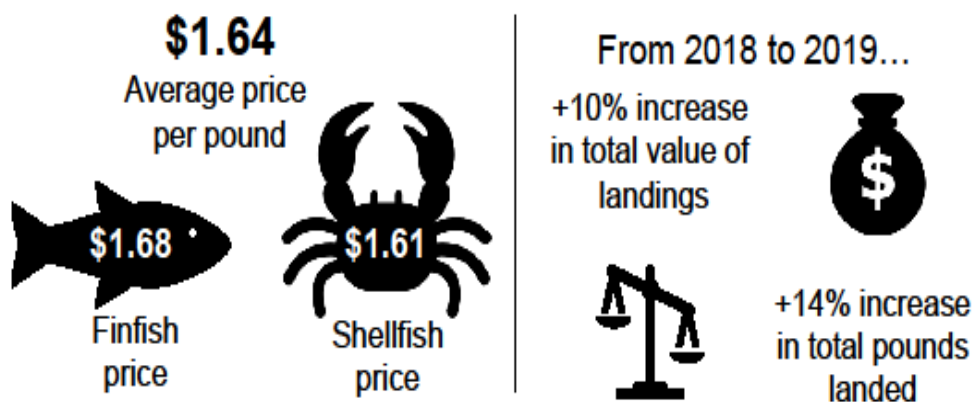
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## Fisheries Economics Program: 2019 Highlights

### Commercial Industry



In 20 years, commercial participation has halved

2019: 2,535 participants

2000: 5,034 participants

**Commercial fishing produced \$500 million in spillover sales and income impacts to the state**

### Recreational Industry

**\$3.13B total estimated angler expenditures in 2019**

Top spending categories (approximate values):



Vehicle and Boat Fuel:  
\$1B



Groceries:  
\$700M



Bait and Tackle:  
\$700M

**Recreational fishing expenditures supported 34,000 additional jobs and \$4B in spillover sales impacts in NC**



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

Rank	2019		2018		2017	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	\$22,194,103	Blue Crabs, Hard	\$17,296,000	Shrimp, White	\$20,628,755
2	Shrimp, White	\$18,878,990	Shrimp, Brown	\$11,198,994	Blue Crabs, Hard	\$17,767,012
3	Flounder, Summer	\$7,292,375	Shrimp, White	\$8,571,111	Shrimp, Brown	\$8,536,519
4	Oysters	\$4,889,703	Flounder, Summer	\$6,893,316	Flounder, Summer	\$6,315,997
5	Tunas	\$3,440,754	Tunas	\$4,332,426	Flounder, Southern	\$5,656,948

Rank	2016		2015		2014	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	\$20,736,477	Blue Crabs, Hard	\$29,606,587	Blue Crabs, Hard	\$29,954,723
2	Shrimp, White	\$19,728,491	Shrimp, Brown	\$10,513,252	Shrimp, Brown	\$10,326,997
3	Shrimp, Brown	\$8,386,288	Flounder, Summer	\$9,092,495	Flounder, Summer	\$8,225,282
4	Flounder, Summer	\$8,238,710	Shrimp, White	\$6,228,725	Flounder, Southern	\$4,839,672
5	Oysters	\$4,059,849	Clams, Hard	\$5,038,973	Oysters	\$4,544,236

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

Rank	2019		2018		2017	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	\$22,194,103	Blue Crabs, Hard	\$17,296,000	Shrimp, White	\$20,628,755
2	Shrimp, White	\$18,878,990	Shrimp, Brown	\$11,198,994	Blue Crabs, Hard	\$17,767,012
3	Oysters	\$4,889,703	Shrimp, White	\$8,571,111	Shrimp, Brown	\$8,536,519
4	Shrimp, Brown	\$2,964,476	Oysters	\$3,897,568	Oysters	\$5,590,559
5	Blue Crabs, Peeler	\$1,237,027	Clams, Hard	\$1,628,664	Blue Crabs, Soft	\$2,791,960

Rank	2016		2015		2014	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Blue Crabs, Hard	\$20,736,477	Blue Crabs, Hard	\$29,606,587	Blue Crabs, Hard	\$29,954,723
2	Shrimp, White	\$19,728,491	Shrimp, Brown	\$10,513,252	Shrimp, Brown	\$10,326,997
3	Shrimp, Brown	\$8,386,288	Shrimp, White	\$6,228,725	Oysters	\$4,544,236
4	Oysters	\$4,059,849	Clams, Hard	\$5,038,973	Shrimp, White	\$3,483,015
5	Clams, Hard	\$2,578,120	Oysters	\$3,911,399	Clams, Hard	\$2,866,096

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

Rank	2019		2018		2017	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Flounder, Summer	\$7,292,375	Flounder, Summer	\$6,893,316	Flounder, Summer	\$6,315,997
2	Tunas	\$3,440,754	Tunas	\$4,332,426	Flounder, Southern	\$5,656,948
3	Flounder, Southern	\$3,077,470	Flounder, Southern	\$3,822,575	Tunas	\$5,091,809
4	Mackerel, King	\$1,570,680	Croaker, Atlantic	\$1,631,494	Sea Basses	\$1,862,633
5	Snappers	\$1,566,839	Sea Basses	\$1,518,224	Mackerel, Spanish	\$1,384,543

Rank	2016		2015		2014	
	Species	Ex-Vessel Value	Species	Ex-Vessel Value	Species	Ex-Vessel Value
1	Flounder, Summer	\$8,238,710	Flounder, Summer	\$9,092,495	Flounder, Summer	\$8,225,282
2	Flounder, Southern	\$3,618,196	Flounder, Southern	\$3,823,788	Flounder, Southern	\$4,839,672
3	Tunas	\$3,220,820	Tunas	\$2,916,057	Tunas	\$3,647,436
4	Croaker, Atlantic	\$2,216,211	Croaker, Atlantic	\$1,646,350	Swordfish	\$2,109,549
5	Sea Basses	\$1,346,245	Sea Basses	\$1,366,822	Croaker, Atlantic	\$1,865,595

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

Rank	2019		2018		2017	
	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Crab Pot	\$22,754,034	Shrimp Trawl	\$19,463,592	Shrimp Trawl	\$28,606,820
2	Shrimp Trawl	\$21,560,762	Crab Pot	\$17,817,831	Crab Pot	\$18,259,177
3	Flounder Trawl	\$8,234,946	Flounder Trawl	\$7,988,145	Gill net (anchored)	\$9,257,123
4	Gill net (anchored)	\$7,217,753	Gill net (anchored)	\$7,589,088	Flounder Trawl	\$7,681,131
5	Longline	\$4,125,185	Longline	\$4,486,112	Longline	\$5,404,330

Rank	2016		2015		2014	
	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value	Gear	Ex-Vessel Value
1	Shrimp Trawl	\$27,247,747	Crab Pot	\$30,438,526	Crab Pot	\$31,254,009
2	Crab Pot	\$21,601,237	Shrimp Trawl	\$16,216,651	Shrimp Trawl	\$13,815,472
3	Flounder Trawl	\$9,096,175	Flounder Trawl	\$10,047,329	Gill net (anchored)	\$9,438,932
4	Gill net (anchored)	\$8,680,162	Gill net (anchored)	\$8,065,726	Flounder Trawl	\$9,016,925
5	Longline	\$4,975,314	Longline	\$4,715,705	Longline	\$6,706,582

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

Rank	2019		2018		2017	
	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	\$19,822,344	Dare	\$19,280,585	Dare	\$23,683,159
2	Carteret	\$18,636,908	Carteret	\$16,589,911	Carteret	\$20,662,095
3	Hyde	\$9,182,132	Hyde	\$10,815,091	Hyde	\$12,811,250
4	Pamlico	\$8,948,624	Pamlico	\$8,051,828	Pamlico	\$9,836,132
5	Onslow	\$5,271,885	Onslow	\$3,580,125	Onslow	\$5,792,909

Rank	2016		2015		2014	
	County	Ex-Vessel Value	County	Ex-Vessel Value	County	Ex-Vessel Value
1	Dare	\$21,279,105	Dare	\$20,975,467	Dare	\$26,596,445
2	Carteret	\$18,222,596	Carteret	\$18,305,211	Carteret	\$14,583,443
3	Hyde	\$12,860,060	Hyde	\$10,980,166	Hyde	\$10,352,880
4	Pamlico	\$10,561,218	Pamlico	\$8,478,567	Pamlico	\$6,465,954
5	Onslow	\$6,558,833	Onslow	\$6,019,544	Camden	\$6,087,926

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

Rank	2019		2018		2017	
	Port	Ex-Vessel Value	Port	Ex-Vessel Value	Port	Ex-Vessel Value
1	Morehead City/Beaufort	\$14,229,673	Morehead City/Beaufort	\$13,043,235	Wanchese	\$16,253,538
2	Wanchese	\$12,000,916	Wanchese	\$12,085,504	Morehead City/Beaufort	\$15,951,459
3	Engelhard	\$5,146,984	Engelhard	\$5,821,504	Engelhard	\$7,611,885
4	Oriental	\$4,916,343	Oriental	\$4,676,438	Sneads Ferry	\$4,796,742
5	Sneads Ferry	\$4,522,232	Swan Quarter	\$4,015,823	Oriental	\$4,647,158

Rank	2016		2015		2014	
	Port	Ex-Vessel Value	Port	Ex-Vessel Value	Port	Ex-Vessel Value
1	Wanchese	\$14,724,895	Morehead City/Beaufort	\$14,187,831	Wanchese	\$17,012,857
2	Morehead City/Beaufort	\$14,486,751	Wanchese	\$13,325,325	Morehead City/Beaufort	\$10,721,496
3	Engelhard	\$7,505,492	Engelhard	\$6,710,760	Engelhard	\$6,750,471
4	Sneads Ferry	\$5,244,145	Shiloh	\$5,343,108	Shiloh	\$6,079,732
5	Hobucken/Lowland	\$4,691,929	Columbia	\$4,922,453	Columbia	\$4,727,104

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

Range of Ex-Vessel Value	2019		2018	
	Participants	Total Value	Participants	Total Value
\$1-\$499	406	\$86,528	446	\$91,842
\$500-\$999	170	\$122,921	218	\$158,134
\$1,000-\$4,999	584	\$1,490,806	576	\$1,509,756
\$5,000-\$9,999	282	\$2,035,908	312	\$2,230,003
\$10,000-\$24,999	387	\$6,256,234	403	\$6,652,199
\$25,000-\$49,999	262	\$9,364,788	235	\$8,325,330
\$50,000-\$99,999	195	\$14,310,397	259	\$18,340,942
\$100,000-\$249,999	190	\$28,823,274	154	\$22,789,202
\$250,000-\$499,999	47	\$15,897,834	44	\$14,941,702
Over \$500,000	12	\$8,244,145	4	\$2,859,715
Total	2,535	\$86,632,835	2,651	\$77,898,825

Range of Ex-Vessel Value	2017		2016	
	Participants	Total Value	Participants	Total Value
\$1-\$499	470	\$98,587	475	\$102,098
\$500-\$999	227	\$166,251	221	\$158,178
\$1,000-\$4,999	649	\$1,694,390	664	\$1,722,376
\$5,000-\$9,999	337	\$2,469,292	363	\$2,604,829
\$10,000-\$24,999	474	\$7,741,548	457	\$7,293,014
\$25,000-\$49,999	294	\$10,523,339	316	\$11,211,651
\$50,000-\$99,999	247	\$18,008,827	232	\$16,829,501
\$100,000-\$249,999	178	\$26,559,273	191	\$28,511,515
\$250,000-\$499,999	52	\$17,628,847	39	\$13,409,334
Over \$500,000	17	\$11,703,358	16	\$12,281,260
Total	2,945	\$96,593,712	2,974	\$94,123,755

Range of Ex-Vessel Value	2015		2014	
	Participants	Total Value	Participants	Total Value
\$1-\$499	528	\$113,804	601	\$122,308
\$500-\$999	279	\$202,711	242	\$174,569
\$1,000-\$4,999	701	\$1,782,328	732	\$1,859,711
\$5,000-\$9,999	326	\$2,368,502	351	\$2,555,380
\$10,000-\$24,999	462	\$7,627,853	439	\$7,204,381
\$25,000-\$49,999	314	\$11,150,863	308	\$10,999,495
\$50,000-\$99,999	255	\$17,743,811	240	\$17,372,562
\$100,000-\$249,999	217	\$32,346,219	204	\$30,555,946
\$250,000-\$499,999	42	\$13,419,995	46	\$15,461,200
Over \$500,000	12	\$7,966,309	11	\$7,804,722
Total	3,136	\$94,722,394	3,174	\$94,110,276

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

Range of Ex-Vessel Value	2013		2012	
	Participants	Total Value	Participants	Total Value
\$1-\$499	603	\$122,802	667	\$135,093
\$500-\$999	266	\$192,033	244	\$180,865
\$1,000-\$4,999	710	\$1,846,711	760	\$1,927,886
\$5,000-\$9,999	364	\$2,621,547	370	\$2,673,233
\$10,000-\$24,999	437	\$7,171,606	430	\$6,995,774
\$25,000-\$49,999	337	\$11,884,546	293	\$10,533,771
\$50,000-\$99,999	229	\$16,368,845	220	\$15,220,473
\$100,000-\$249,999	167	\$25,479,283	149	\$21,646,334
\$250,000-\$499,999	35	\$10,975,611	31	\$9,770,831
Over \$500,000	3	\$2,440,694	5	\$3,486,833
<b>Total</b>	<b>3,151</b>	<b>\$79,103,678</b>	<b>3,169</b>	<b>\$72,571,092</b>

Range of Ex-Vessel Value	2011		2010	
	Participants	Total Value	Participants	Total Value
\$1-\$499	716	\$145,068	856	\$168,504
\$500-\$999	261	\$189,378	309	\$226,453
\$1,000-\$4,999	761	\$1,955,307	768	\$1,971,177
\$5,000-\$9,999	344	\$2,419,812	396	\$2,770,755
\$10,000-\$24,999	465	\$7,448,284	475	\$7,700,522
\$25,000-\$49,999	290	\$10,215,529	323	\$11,515,814
\$50,000-\$99,999	238	\$17,033,726	281	\$20,354,586
\$100,000-\$249,999	140	\$20,797,393	160	\$23,083,296
\$250,000-\$499,999	26	\$9,078,159	25	\$8,490,881
Over \$500,000	3	\$1,901,352	5	\$3,584,743
<b>Total</b>	<b>3,244</b>	<b>\$71,184,008</b>	<b>3,598</b>	<b>\$79,866,731</b>

Range of Ex-Vessel Value	2009		2008	
	Participants	Total Value	Participants	Total Value
\$1-\$499	894	\$168,722	881	\$165,245
\$500-\$999	343	\$250,123	316	\$228,299
\$1,000-\$4,999	857	\$2,212,871	834	\$2,126,719
\$5,000-\$9,999	414	\$2,971,334	355	\$2,559,749
\$10,000-\$24,999	524	\$8,463,374	495	\$7,901,800
\$25,000-\$49,999	308	\$10,859,195	321	\$11,462,835
\$50,000-\$99,999	224	\$15,970,554	240	\$17,103,112
\$100,000-\$249,999	162	\$23,425,162	187	\$29,339,527
\$250,000-\$499,999	23	\$7,430,468	26	\$8,841,946
Over \$500,000	7	\$5,444,176	9	\$7,080,472
<b>Total</b>	<b>3,756</b>	<b>\$77,195,980</b>	<b>3,664</b>	<b>\$86,809,702</b>

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

Range of Ex-Vessel Value	2007		2006	
	Participants	Total Value	Participants	Total Value
\$1-\$499	866	\$167,992	776	\$154,071
\$500-\$999	311	\$223,218	329	\$235,511
\$1,000-\$4,999	912	\$2,246,134	883	\$2,218,834
\$5,000-\$9,999	381	\$2,723,610	402	\$2,848,520
\$10,000-\$24,999	509	\$8,097,533	542	\$8,997,385
\$25,000-\$49,999	337	\$11,855,081	329	\$11,733,036
\$50,000-\$99,999	225	\$16,014,561	196	\$13,688,760
\$100,000-\$249,999	158	\$23,632,671	113	\$16,218,470
\$250,000-\$499,999	36	\$12,257,611	29	\$9,332,685
Over \$500,000	7	\$5,065,131	7	\$4,658,049
<b>Total</b>	<b>3,742</b>	<b>\$82,283,541</b>	<b>3,606</b>	<b>\$70,085,319</b>

Range of Ex-Vessel Value	2005		2004	
	Participants	Total Value	Participants	Total Value
\$1-\$499	844	\$177,473	919	\$176,687
\$500-\$999	361	\$265,659	353	\$255,791
\$1,000-\$4,999	977	\$2,519,273	1,004	\$2,575,234
\$5,000-\$9,999	454	\$3,267,100	468	\$3,301,378
\$10,000-\$24,999	582	\$9,513,054	708	\$11,496,009
\$25,000-\$49,999	348	\$12,084,313	424	\$14,840,589
\$50,000-\$99,999	215	\$14,809,717	253	\$17,008,833
\$100,000-\$249,999	93	\$13,421,323	106	\$15,818,767
\$250,000-\$499,999	16	\$4,993,553	20	\$6,526,428
Over \$500,000	5	\$3,836,941	7	\$7,705,359
<b>Total</b>	<b>3,895</b>	<b>\$64,888,407</b>	<b>4,262</b>	<b>\$79,705,074</b>

Range of Ex-Vessel Value	2003		2002	
	Participants	Total Value	Participants	Total Value
\$1-\$499	1,021	\$189,284	1,121	\$211,511
\$500-\$999	369	\$264,132	387	\$279,368
\$1,000-\$4,999	922	\$2,334,153	1,045	\$2,644,370
\$5,000-\$9,999	456	\$3,319,208	483	\$3,458,734
\$10,000-\$24,999	677	\$11,112,276	689	\$10,918,732
\$25,000-\$49,999	412	\$14,764,643	444	\$15,953,833
\$50,000-\$99,999	327	\$22,330,859	338	\$23,561,411
\$100,000-\$249,999	154	\$22,757,594	160	\$23,278,020
\$250,000-\$499,999	12	\$3,928,698	22	\$6,837,287
Over \$500,000	5	\$6,111,985	5	\$7,604,274
<b>Total</b>	<b>4,355</b>	<b>\$87,112,832</b>	<b>4,694</b>	<b>\$94,747,541</b>

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

Range of Ex-Vessel Value	2001		2000	
	Participants	Total Value	Participants	Total Value
\$1-\$499	1,242	\$234,705	1,157	\$219,789
\$500-\$999	444	\$322,809	419	\$301,087
\$1,000-\$4,999	1,140	\$2,903,186	1,055	\$2,697,402
\$5,000-\$9,999	559	\$4,081,069	523	\$3,781,356
\$10,000-\$24,999	726	\$11,801,269	726	\$11,971,752
\$25,000-\$49,999	508	\$17,971,103	571	\$20,071,536
\$50,000-\$99,999	312	\$21,703,642	357	\$24,705,032
\$100,000-\$249,999	133	\$18,705,764	189	\$26,971,373
\$250,000-\$499,999	12	\$3,958,968	29	\$9,203,909
Over \$500,000	5	\$6,459,596	8	\$8,391,575
Total	5,081	\$88,142,112	5,034	\$108,314,811

Range of Ex-Vessel Value	1999		1998	
	Participants	Total Value	Participants	Total Value
\$1-\$499	1,193	\$221,957	1,042	\$205,653
\$500-\$999	411	\$301,503	405	\$289,624
\$1,000-\$4,999	1,035	\$2,582,818	993	\$2,562,963
\$5,000-\$9,999	481	\$3,478,269	490	\$3,569,211
\$10,000-\$24,999	749	\$12,375,062	738	\$12,368,272
\$25,000-\$49,999	523	\$18,535,309	524	\$18,980,608
\$50,000-\$99,999	289	\$19,816,325	347	\$23,763,125
\$100,000-\$249,999	133	\$18,427,867	138	\$18,962,973
\$250,000-\$499,999	16	\$5,306,893	8	\$2,672,040
Over \$500,000	4	\$18,633,608	3	\$17,644,065
Total	4,834	\$99,679,612	4,688	\$101,018,535

Range of Ex-Vessel Value	1997		1996	
	Participants	Total Value	Participants	Total Value
\$1-\$499	1,208	\$225,438	1,208	\$227,526
\$500-\$999	414	\$299,703	407	\$296,571
\$1,000-\$4,999	1,115	\$2,876,900	1,143	\$2,874,042
\$5,000-\$9,999	548	\$3,997,239	590	\$4,338,034
\$10,000-\$24,999	856	\$14,128,405	829	\$13,736,281
\$25,000-\$49,999	576	\$20,603,700	564	\$19,815,555
\$50,000-\$99,999	305	\$20,720,739	335	\$23,189,379
\$100,000-\$249,999	118	\$16,741,568	116	\$16,547,993
\$250,000-\$499,999	14	\$4,418,969	10	\$2,975,607
Over \$500,000	6	\$24,975,456	5	\$21,532,505
Total	5,160	\$108,988,117	5,207	\$105,533,493

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

Range of Ex-Vessel Value	1995		1994	
	Participants	Total Value	Participants	Total Value
\$1-\$499	1,258	\$246,059	1,346	\$254,460
\$500-\$999	440	\$326,253	445	\$323,517
\$1,000-\$4,999	1,259	\$3,252,153	1,322	\$3,341,972
\$5,000-\$9,999	624	\$4,619,448	635	\$4,608,616
\$10,000-\$24,999	877	\$14,378,075	784	\$12,684,774
\$25,000-\$49,999	542	\$19,472,751	443	\$15,273,291
\$50,000-\$99,999	337	\$23,271,907	244	\$16,998,346
\$100,000-\$249,999	133	\$18,905,145	75	\$10,354,865
\$250,000-\$499,999	17	\$5,803,214	16	\$4,776,628
Over \$500,000	7	\$19,092,944	7	\$22,659,401
Total	5,494	\$109,367,950	5,317	\$91,275,869

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

Range of Ex-Vessel Value	2019		2018	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	44	\$10,293	53	\$13,149
\$500-\$999	25	\$18,678	27	\$20,362
\$1,000-\$4,999	103	\$282,767	123	\$334,613
\$5,000-\$9,999	68	\$509,044	79	\$584,979
\$10,000-\$24,999	91	\$1,491,117	85	\$1,356,174
\$25,000-\$49,999	39	\$1,305,716	36	\$1,345,204
\$50,000-\$99,999	43	\$3,093,337	39	\$2,745,760
\$100,000-\$249,999	53	\$8,447,774	45	\$7,189,470
\$250,000-\$499,999	23	\$7,674,302	24	\$8,389,180
\$500,000-\$999,999	23	\$16,648,673	17	\$11,850,125
Over \$1,000,000	20	\$47,151,134	19	\$44,069,809
Total	532	\$86,632,835	547	\$77,898,825

Range of Ex-Vessel Value	2017		2016	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	40	\$8,196	54	\$12,224
\$500-\$999	24	\$17,061	26	\$18,847
\$1,000-\$4,999	106	\$274,775	110	\$291,129
\$5,000-\$9,999	60	\$438,442	73	\$516,675
\$10,000-\$24,999	103	\$1,688,482	102	\$1,692,885
\$25,000-\$49,999	43	\$1,555,528	62	\$2,283,578
\$50,000-\$99,999	42	\$2,985,671	36	\$2,554,458
\$100,000-\$249,999	44	\$6,967,251	47	\$7,245,656
\$250,000-\$499,999	27	\$9,630,404	23	\$8,442,666
\$500,000-\$999,999	20	\$14,464,953	22	\$15,873,692
Over \$1,000,000	23	\$58,562,948	20	\$55,191,945
Total	532	\$96,593,712	575	\$94,123,755



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

Range of Ex-Vessel Value	2015		2014	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	53	\$11,104	65	\$11,755
\$500-\$999	44	\$32,034	45	\$32,562
\$1,000-\$4,999	114	\$291,595	124	\$324,035
\$5,000-\$9,999	69	\$490,788	68	\$506,777
\$10,000-\$24,999	101	\$1,633,264	94	\$1,528,615
\$25,000-\$49,999	64	\$2,163,205	60	\$2,221,634
\$50,000-\$99,999	48	\$3,169,827	40	\$2,928,728
\$100,000-\$249,999	49	\$7,950,300	39	\$6,252,184
\$250,000-\$499,999	22	\$7,849,595	29	\$10,007,367
\$500,000-\$999,999	23	\$16,071,128	18	\$13,021,607
Over \$1,000,000	23	\$55,059,553	24	\$57,275,012
<b>Total</b>	<b>610</b>	<b>\$94,722,394</b>	<b>606</b>	<b>\$94,110,276</b>

Range of Ex-Vessel Value	2013		2012	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	62	\$12,864	65	\$16,186
\$500-\$999	42	\$31,582	50	\$36,539
\$1,000-\$4,999	140	\$377,346	135	\$339,651
\$5,000-\$9,999	68	\$496,801	86	\$624,914
\$10,000-\$24,999	103	\$1,693,114	108	\$1,777,895
\$25,000-\$49,999	56	\$2,040,555	46	\$1,579,102
\$50,000-\$99,999	26	\$1,893,795	35	\$2,625,885
\$100,000-\$249,999	53	\$9,119,956	44	\$7,597,981
\$250,000-\$499,999	24	\$8,596,165	25	\$9,222,944
\$500,000-\$999,999	18	\$12,687,877	18	\$12,885,904
Over \$1,000,000	20	\$42,153,622	17	\$35,864,089
<b>Total</b>	<b>612</b>	<b>\$79,103,678</b>	<b>629</b>	<b>\$72,571,092</b>

Range of Ex-Vessel Value	2011		2010	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	84	\$20,508	83	\$18,058
\$500-\$999	36	\$27,660	41	\$30,342
\$1,000-\$4,999	154	\$386,944	141	\$366,850
\$5,000-\$9,999	79	\$577,880	84	\$627,673
\$10,000-\$24,999	104	\$1,703,113	106	\$1,707,961
\$25,000-\$49,999	49	\$1,633,912	55	\$1,961,107
\$50,000-\$99,999	36	\$2,561,811	44	\$3,037,290
\$100,000-\$249,999	36	\$5,530,747	36	\$5,487,224
\$250,000-\$499,999	25	\$8,958,433	31	\$11,133,355
\$500,000-\$999,999	21	\$14,533,737	25	\$17,348,494
Over \$1,000,000	18	\$35,249,265	17	\$38,148,378
<b>Total</b>	<b>642</b>	<b>\$71,184,008</b>	<b>663</b>	<b>\$79,866,731</b>

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

Range of Ex-Vessel Value	2009		2008	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	82	\$18,276	67	\$14,614
\$500-\$999	51	\$36,571	39	\$29,073
\$1,000-\$4,999	168	\$411,392	144	\$383,600
\$5,000-\$9,999	84	\$628,715	61	\$432,423
\$10,000-\$24,999	95	\$1,505,021	98	\$1,589,894
\$25,000-\$49,999	50	\$1,738,346	44	\$1,590,093
\$50,000-\$99,999	37	\$2,660,711	36	\$2,561,874
\$100,000-\$249,999	46	\$7,864,114	45	\$7,203,828
\$250,000-\$499,999	34	\$12,404,263	29	\$10,495,107
\$500,000-\$999,999	16	\$10,667,814	26	\$18,524,021
Over \$1,000,000	20	\$39,260,757	20	\$43,985,176
<b>Total</b>	<b>683</b>	<b>\$77,195,980</b>	<b>609</b>	<b>\$86,809,702</b>

Range of Ex-Vessel Value	2007		2006	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	63	\$14,338	54	\$11,992
\$500-\$999	48	\$34,759	46	\$34,228
\$1,000-\$4,999	123	\$309,363	126	\$334,759
\$5,000-\$9,999	68	\$492,135	60	\$409,937
\$10,000-\$24,999	95	\$1,560,621	107	\$1,769,478
\$25,000-\$49,999	52	\$1,868,251	65	\$2,352,645
\$50,000-\$99,999	42	\$2,862,363	42	\$2,984,499
\$100,000-\$249,999	42	\$6,830,952	33	\$5,489,874
\$250,000-\$499,999	30	\$10,937,353	36	\$12,365,749
\$500,000-\$999,999	24	\$15,421,256	20	\$13,191,023
Over \$1,000,000	19	\$41,952,149	14	\$31,141,134
<b>Total</b>	<b>606</b>	<b>\$82,283,541</b>	<b>603</b>	<b>\$70,085,319</b>

Range of Ex-Vessel Value	2005		2004	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	74	\$17,215	83	\$18,051
\$500-\$999	47	\$34,752	36	\$26,008
\$1,000-\$4,999	136	\$342,364	160	\$426,929
\$5,000-\$9,999	77	\$568,141	76	\$554,507
\$10,000-\$24,999	90	\$1,466,394	115	\$1,866,119
\$25,000-\$49,999	55	\$1,871,706	57	\$1,983,520
\$50,000-\$99,999	51	\$3,459,194	44	\$2,989,955
\$100,000-\$249,999	40	\$6,904,704	51	\$8,780,408
\$250,000-\$499,999	36	\$12,135,554	41	\$14,335,665
\$500,000-\$999,999	23	\$16,345,574	23	\$16,025,280
Over \$1,000,000	11	\$21,742,810	15	\$32,698,633
<b>Total</b>	<b>640</b>	<b>\$64,888,407</b>	<b>701</b>	<b>\$79,705,074</b>

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

Range of Ex-Vessel Value	2003		2002	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	74	\$15,760	81	\$16,810
\$500-\$999	37	\$27,208	49	\$36,215
\$1,000-\$4,999	155	\$399,175	164	\$416,709
\$5,000-\$9,999	94	\$707,812	84	\$597,629
\$10,000-\$24,999	94	\$1,547,430	89	\$1,460,870
\$25,000-\$49,999	72	\$2,525,650	77	\$2,720,825
\$50,000-\$99,999	49	\$3,640,869	41	\$2,845,825
\$100,000-\$249,999	60	\$9,950,339	49	\$7,748,864
\$250,000-\$499,999	31	\$10,595,848	35	\$12,403,209
\$500,000-\$999,999	32	\$22,723,602	36	\$24,161,971
Over \$1,000,000	18	\$34,979,137	21	\$42,338,613
<b>Total</b>	<b>716</b>	<b>\$87,112,832</b>	<b>726</b>	<b>\$94,747,541</b>

Range of Ex-Vessel Value	2001		2000	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	86	\$18,277	71	\$17,377
\$500-\$999	48	\$36,258	52	\$38,983
\$1,000-\$4,999	143	\$326,253	130	\$332,049
\$5,000-\$9,999	82	\$601,736	86	\$616,049
\$10,000-\$24,999	85	\$1,466,458	87	\$1,385,585
\$25,000-\$49,999	72	\$2,502,610	61	\$2,190,950
\$50,000-\$99,999	42	\$2,898,177	50	\$3,430,948
\$100,000-\$249,999	56	\$9,218,425	66	\$11,105,969
\$250,000-\$499,999	44	\$15,013,452	28	\$10,073,021
\$500,000-\$999,999	28	\$20,175,082	38	\$26,037,241
Over \$1,000,000	20	\$35,885,384	28	\$53,086,638
<b>Total</b>	<b>706</b>	<b>\$88,142,112</b>	<b>697</b>	<b>\$108,314,811</b>

Range of Ex-Vessel Value	1999		1998	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	94	\$21,477	93	\$18,281
\$500-\$999	43	\$31,480	47	\$35,556
\$1,000-\$4,999	151	\$394,619	154	\$401,895
\$5,000-\$9,999	91	\$667,243	64	\$461,241
\$10,000-\$24,999	85	\$1,442,144	95	\$1,620,619
\$25,000-\$49,999	71	\$2,570,883	61	\$2,191,822
\$50,000-\$99,999	54	\$3,899,416	59	\$4,154,979
\$100,000-\$249,999	62	\$9,849,972	56	\$9,064,737
\$250,000-\$499,999	48	\$17,356,410	48	\$17,512,993
\$500,000-\$999,999	39	\$27,071,047	34	\$24,710,336
Over \$1,000,000	22	\$36,374,921	26	\$40,846,077
<b>Total</b>	<b>760</b>	<b>\$99,679,612</b>	<b>737</b>	<b>\$101,018,535</b>

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

Range of Ex-Vessel Value	1997		1996	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	73	\$15,316	82	\$16,595
\$500-\$999	39	\$28,463	49	\$36,150
\$1,000-\$4,999	145	\$376,363	151	\$409,797
\$5,000-\$9,999	75	\$552,589	72	\$502,989
\$10,000-\$24,999	88	\$1,476,779	95	\$1,489,305
\$25,000-\$49,999	72	\$2,474,940	60	\$2,161,251
\$50,000-\$99,999	55	\$3,935,810	46	\$3,228,174
\$100,000-\$249,999	48	\$7,598,762	55	\$9,111,449
\$250,000-\$499,999	50	\$18,194,258	37	\$13,773,845
\$500,000-\$999,999	36	\$24,425,559	36	\$26,776,573
Over \$1,000,000	27	\$49,909,279	30	\$48,027,364
<b>Total</b>	<b>708</b>	<b>\$108,988,117</b>	<b>713</b>	<b>\$105,533,493</b>

Range of Ex-Vessel Value	1995		1994	
	Dealers	Total Value	Dealers	Total Value
\$1-\$499	112	\$21,974	89	\$18,397
\$500-\$999	42	\$30,196	50	\$35,522
\$1,000-\$4,999	157	\$435,433	137	\$330,770
\$5,000-\$9,999	73	\$521,146	53	\$385,533
\$10,000-\$24,999	61	\$1,000,105	49	\$837,156
\$25,000-\$49,999	65	\$2,258,478	44	\$1,471,274
\$50,000-\$99,999	43	\$3,033,036	36	\$2,459,653
\$100,000-\$249,999	59	\$10,048,164	57	\$9,333,833
\$250,000-\$499,999	42	\$15,213,635	45	\$16,431,142
\$500,000-\$999,999	37	\$27,826,874	30	\$21,127,090
Over \$1,000,000	26	\$48,978,910	23	\$38,845,499
<b>Total</b>	<b>717</b>	<b>\$109,367,950</b>	<b>613</b>	<b>\$91,275,869</b>

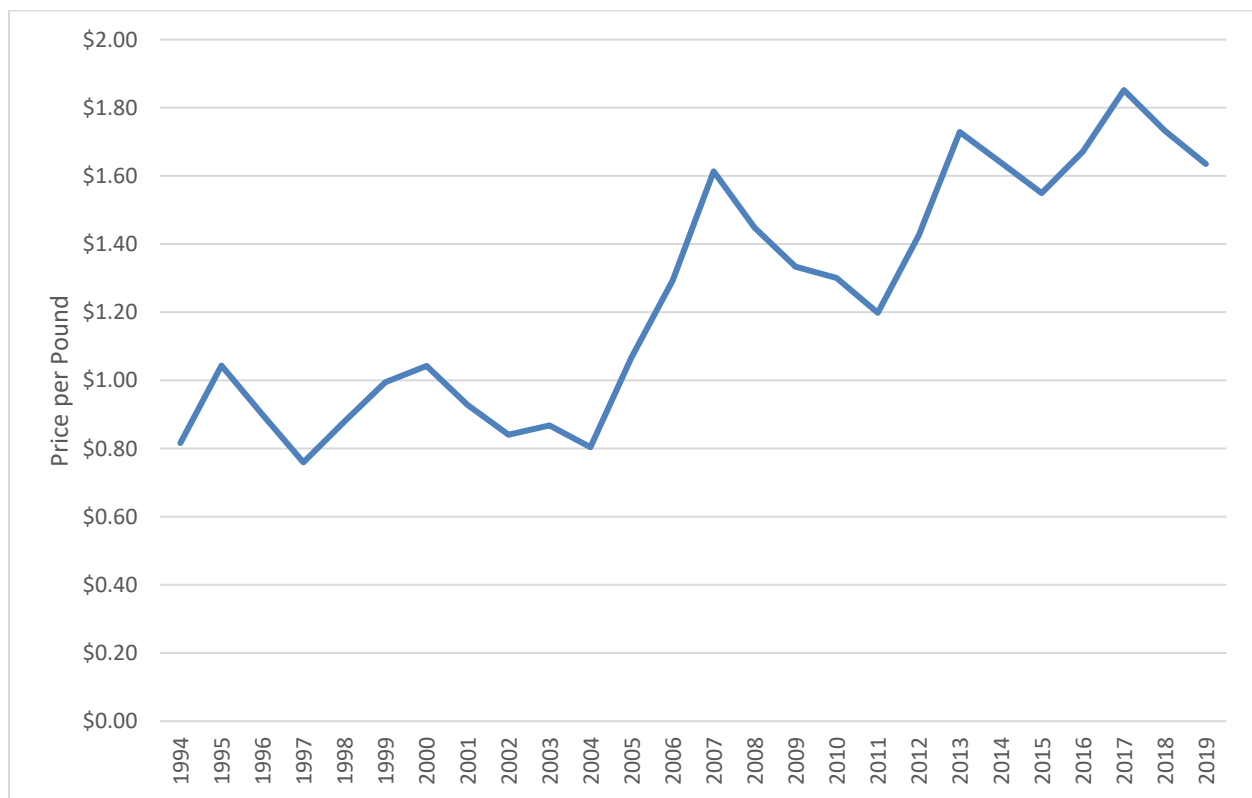
**Table VI.9 Economic impacts of commercial fishing in North Carolina over last 10 years, 2010-2019.**

Year	Commercial Fishing Output <sup>1</sup>				Economic Impacts <sup>2</sup>		
	Commercial Fishermen	Dealers	Pounds	Ex-Vessel Value	Estimated Jobs <sup>3</sup>	Income Impacts	Sales Impacts
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

<sup>1</sup> As reported by the NCDMF Trip Ticket Program

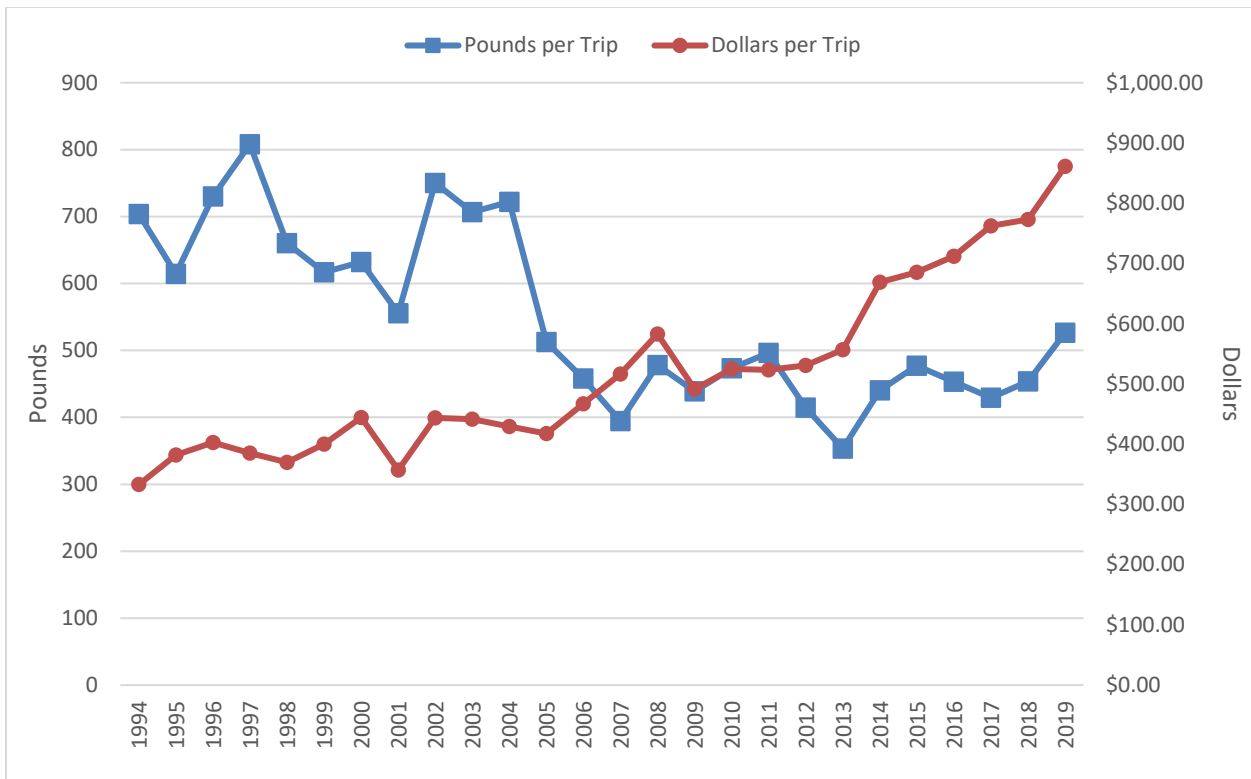
<sup>2</sup> Economic impacts calculated using the NCDMF commercial fishing economic impact model and IMPLAN economic impact modeling software. Economic impact estimates are for the state economy of North Carolina.

<sup>3</sup> Represents both full-time and part-time jobs

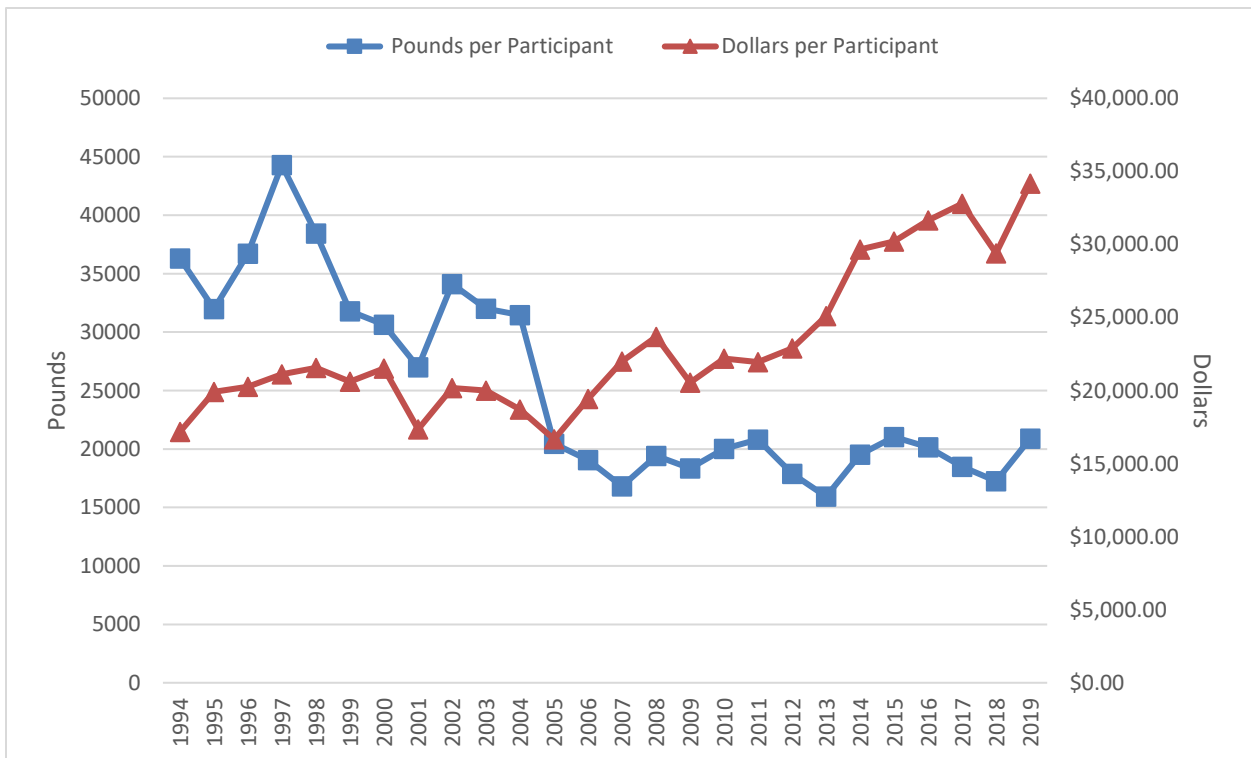


**Figure VI.1 Average price<sup>4</sup> per pound of annual commercial landings, converted to 2019 dollars<sup>1</sup>.**

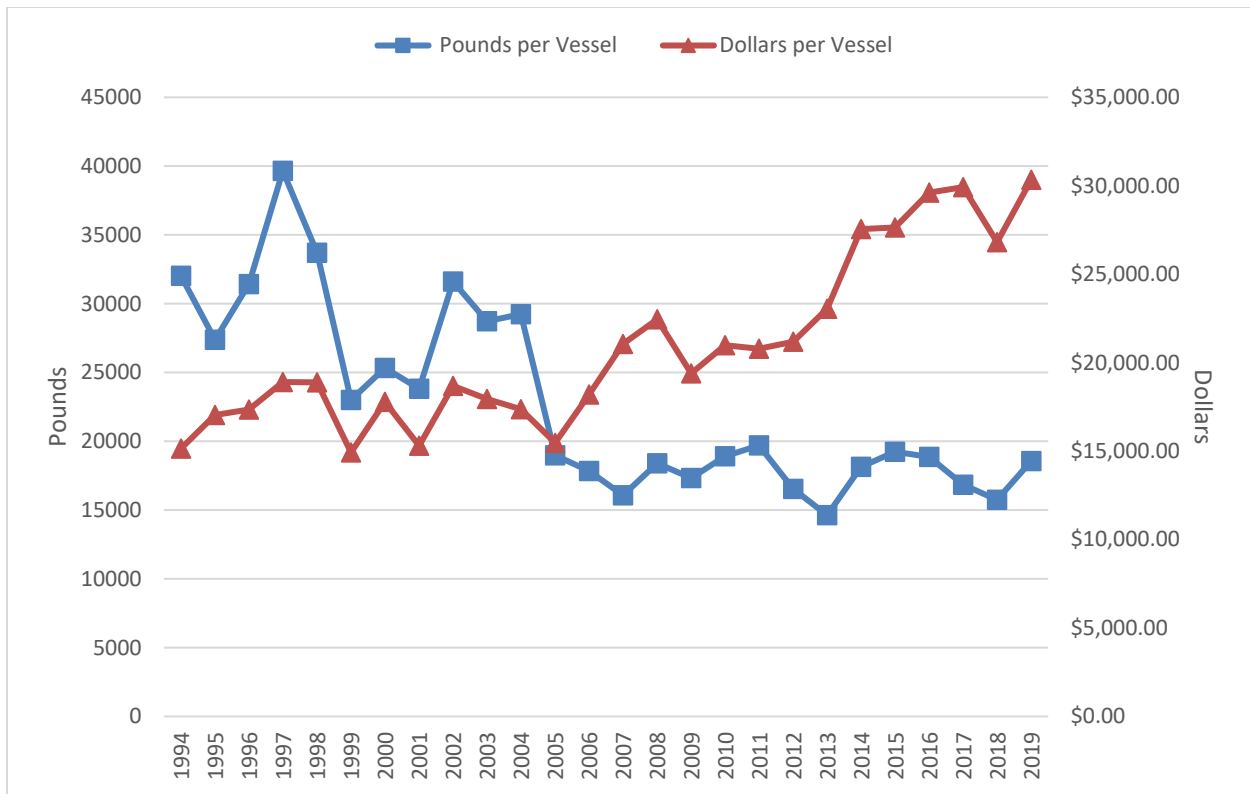
<sup>4</sup> Annual prices converted to 2019 dollars using Federal Reserve Bank of Minneapolis Consumer Price Index value.



**Figure VI.2 Commercial landings and ex-vessel value per fishing trip by year, 1994–2019.**



**Figure VI.3 Commercial landings and ex-vessel value per participant by year, 1994–2019.**



**Figure VI.4 Commercial landings and ex-vessel value per vessel by year, 1994–2019.**

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

Rank	2019		2018		2017	
	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>
1	Spotted Seatrout	2,867,512	Spotted Seatrout	2,867,512	Spotted Seatrout	2,867,512
2	Bluefish	2,699,198	Bluefish	2,699,198	Bluefish	2,699,198
3	Red Drum	2,687,752	Red Drum	2,687,752	Red Drum	2,687,752
4	Kingfish	2,280,088	Kingfish	2,280,088	Kingfish	2,280,088
5	Flounder	1,828,756	Flounder	1,828,756	Flounder	1,828,756

Rank	2016		2015		2014	
	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>
1	Red Drum	3,686,799	Bluefish	3,126,972	Red Drum	2,924,485
2	Bluefish	3,194,322	Kingfish	2,842,692	Bluefish	2,871,661
3	Kingfish	2,741,476	Red Drum	2,758,226	Flounder	2,685,072
4	Flounder	2,420,326	Spotted Seatrout	2,537,677	Kingfish	2,538,697
5	Spotted Seatrout	2,322,627	Flounder	2,536,854	Spotted Seatrout	2,154,879

<sup>5</sup>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).

<sup>6</sup>Pinfish have been removed from these rankings as they are a non-target recreational species.

<sup>7</sup> 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.**

Rank	2019		2018		2017	
	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>
1	Spotted Seatrout	2,498,240	Spotted Seatrout	1,050,588	Spotted Seatrout	1,926,134
2	Red Drum	1,364,573	Red Drum	1,048,725	Red Drum	1,391,701
3	Flounder	1,163,976	Flounder	989,030	Flounder	1,093,787
4	Bluefish	707,534	Bluefish	588,800	Black Sea Bass	678,615
5	Atlantic Croaker	643,412	Atlantic Croaker	525,942	Atlantic Croaker	614,956

Rank	2016		2015		2014	
	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>
1	Spotted Seatrout	1,668,906	Flounder	1,305,922	Spotted Seatrout	1,298,948
2	Flounder	1,326,640	Atlantic Croaker	1,078,329	Flounder	1,259,600
3	Red Drum	1,080,444	Spotted Seatrout	934,595	Red Drum	1,121,028
4	Atlantic Croaker	746,234	Red Drum	877,726	Atlantic Croaker	874,868
5	Pigfish	598,902	Pigfish	643,935	Pigfish	522,315

<sup>5</sup>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).

<sup>6</sup>Pinfish have been removed from these rankings as they are a non-target recreational species.

<sup>7</sup>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.**

Rank	2019		2018		2017	
	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>
1	Bluefish	1,951,179	Red Drum	2,426,857	Bluefish	2,893,889
2	Kingfish	1,879,740	Bluefish	2,426,040	Red Drum	2,278,515
3	Red Drum	1,316,760	Kingfish	1,430,778	Kingfish	2,064,896
4	Spanish Mackerel	1,058,290	Spanish Mackerel	845,544	Spot	1,024,099
5	Spot	685,267	Flounder	711,406	Flounder	996,260

Rank	2016		2015		2014	
	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>	Species <sup>6,7</sup>	Directed Trips <sup>5</sup>
1	Bluefish	2,721,663	Bluefish	2,462,803	Bluefish	2,374,908
2	Red Drum	2,605,528	Kingfish	2,457,751	Kingfish	2,055,200
3	Kingfish	2,312,446	Red Drum	1,868,742	Red Drum	1,785,654
4	Flounder	1,079,109	Spotted Seatrout	1,597,333	Spot	1,701,176
5	Puffers	989,121	Spot	1,354,339	Flounder	1,393,635

<sup>5</sup>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).

<sup>6</sup>Pinfish have been removed from these rankings as they are a non-target recreational species.

<sup>7</sup>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.**

Rank	2019		2018		2017	
	Species <sup>8</sup>	Directed Trips <sup>5</sup>	Species <sup>8</sup>	Directed Trips <sup>5</sup>	Species <sup>8</sup>	Directed Trips <sup>5</sup>
1	Dolphin	166,429	Dolphin	238,032	Dolphin	192,004
2	King Mackerel	145,351	King Mackerel	138,980	Black Sea Bass	183,341
3	Black Sea Bass	79,181	Black Sea Bass	106,091	King Mackerel	118,079
4	Spanish Mackerel	51,855	Spanish Mackerel	66,025	Yellowfin Tuna	88,727
5	Sharks	49,804	Yellowfin Tuna	54,138	Wahoo	74,721

Rank	2016		2015		2014	
	Species <sup>8</sup>	Directed Trips <sup>5</sup>	Species <sup>8</sup>	Directed Trips <sup>5</sup>	Species <sup>8</sup>	Directed Trips <sup>5</sup>
1	Dolphin	271,904	Dolphin	304,978	Dolphin	167,903
2	Yellowfin Tuna	119,950	Black Sea Bass	175,695	Black Sea Bass	141,025
3	Black Sea Bass	116,229	King Mackerel	110,792	Wahoo	70,998
4	Wahoo	83,613	Wahoo	95,921	King Mackerel	69,677
5	King Mackerel	81,702	Spanish Mackerel	72,406	Sharks	49,052

<sup>5</sup>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).

<sup>8</sup>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.**

Rank	2019		2018		2017	
	County	License Holders	County	License Holders	County	License Holders
1	Wake	22,700	Wake	21,346	Wake	23,636
2	Onslow	16,782	Onslow	14,938	Onslow	17,202
3	New Hanover	14,115	New Hanover	13,203	New Hanover	15,090
4	Brunswick	10,646	Brunswick	9,677	Brunswick	10,791
5	Carteret	9,811	Carteret	8,389	Carteret	9,943

Rank	2016		2015		2014	
	County	License Holders	County	License Holders	County	License Holders
1	Wake	24,030	Wake	23,979	Wake	24,443
2	Onslow	17,633	Onslow	18,497	Onslow	18,766
3	New Hanover	15,036	New Hanover	16,042	New Hanover	16,455
4	Brunswick	10,643	Brunswick	11,050	Brunswick	11,489
5	Carteret	10,109	Carteret	10,665	Carteret	11,187

**Table VI.15 Economic impacts of coastal recreational fishing in North Carolina over the last 10 years, 2010-2019.**

Year	Recreational Fishing Output		Economic Impacts		
	Estimated Direct Expenditures (thousands of dollars) <sup>9</sup>	Estimated Jobs <sup>3</sup>	Income Impacts (thousands of dollars) <sup>2</sup>	Output Impacts (thousands of dollars) <sup>2</sup>	
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	

<sup>2</sup> 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.

<sup>3</sup> Includes full time and part time jobs

<sup>9</sup> Estimated expenditures include both durable good expenditures and fishing trip expenditures

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

2019			Economic Impacts		
River System	Estimated Angler Hours <sup>9</sup>	Estimated Expenditures (thousands of dollars) <sup>10</sup>	Estimated Jobs <sup>3</sup>	Income Impacts (thousands of dollars) <sup>11</sup>	Output Impacts (thousands of dollars) <sup>11</sup>
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 <sup>9</sup>	Estimated Expenditures (thousands of dollars) <sup>10</sup>	Estimated Jobs <sup>3</sup>	Income Impacts (thousands of dollars) <sup>11</sup>	Output Impacts (thousands of dollars) <sup>11</sup>
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

<sup>3</sup> Includes full time and part time jobs.

<sup>9</sup> 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.

<sup>10</sup> Estimated fishing trip expenditures based on NCWRC CSMA creel surveys and NCDMF CSMA recreational fishing economic impact model.

<sup>11</sup> Economic impacts calculated using the NCDMF CSMA recreational fishing economic impact model and IMPLAN economic impact modeling software. Economic impact estimates are for the state economy of North Carolina.

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

<b>2017</b>			Economic Impacts		
River System	Estimated Angler Hours <sup>9</sup>	Estimated Expenditures (thousands of dollars) <sup>10</sup>	Estimated Jobs <sup>3</sup>	Income Impacts (thousands of dollars) <sup>11</sup>	Output Impacts (thousands of dollars) <sup>11</sup>
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
<b>Total</b>	<b>464,076</b>	<b>\$10,800</b>	<b>127</b>	<b>\$4,491</b>	<b>\$14,047</b>

<b>2016</b>			Economic Impacts		
River System	Estimated Angler Hours <sup>9</sup>	Estimated Expenditures (thousands of dollars) <sup>10</sup>	Estimated Jobs <sup>3</sup>	Income Impacts (thousands of dollars) <sup>11</sup>	Output Impacts (thousands of dollars) <sup>11</sup>
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
<b>Total</b>	<b>499,335</b>	<b>\$3,460</b>	<b>49</b>	<b>\$1,862</b>	<b>\$5,736</b>

<b>2015</b>			Economic Impacts		
River System	Estimated Angler Hours <sup>9</sup>	Estimated Expenditures (thousands of dollars) <sup>10</sup>	Estimated Jobs <sup>3</sup>	Income Impacts (thousands of dollars) <sup>11</sup>	Output Impacts (thousands of dollars) <sup>11</sup>
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
<b>Total</b>	<b>491,936</b>	<b>\$2,335</b>	<b>20</b>	<b>\$814</b>	<b>\$1,859</b>

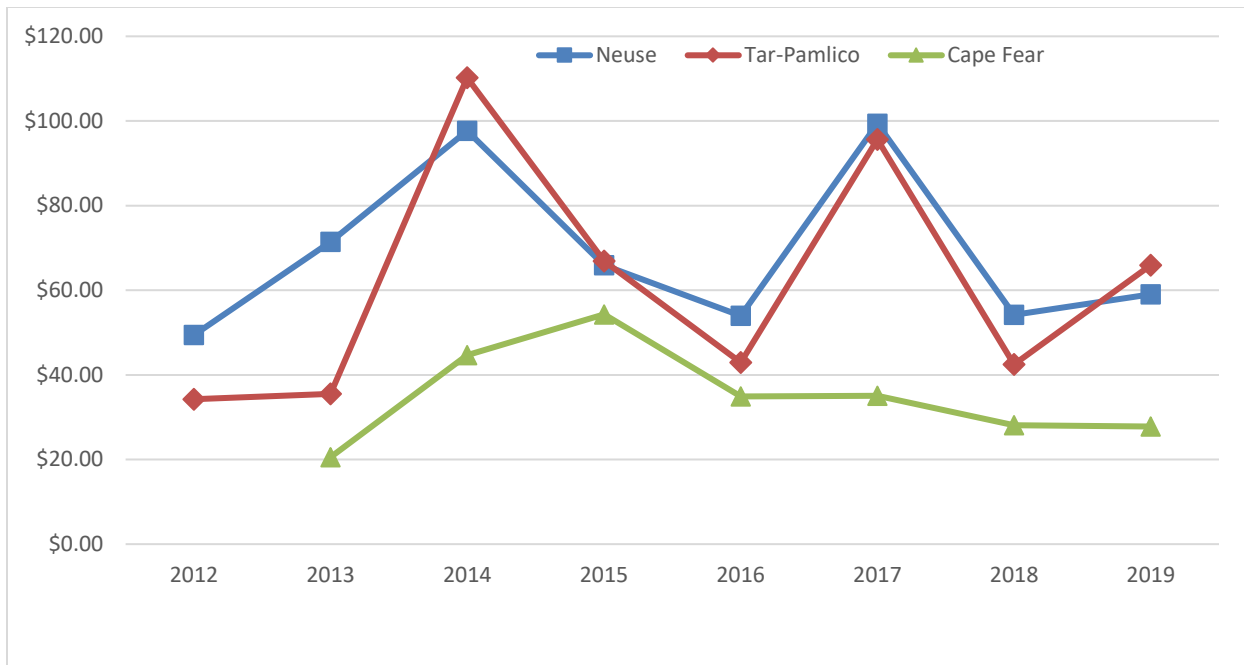
<b>2014</b>			Economic Impacts		
River System	Estimated Angler Hours <sup>9</sup>	Estimated Expenditures (thousands of dollars) <sup>10</sup>	Estimated Jobs <sup>3</sup>	Income Impacts (thousands of dollars) <sup>11</sup>	Output Impacts (thousands of dollars) <sup>11</sup>
Neuse River	215,956	\$1,398	13	\$522	\$1,183
Tar/Pamlico Rivers	136,083	\$956	8	\$325	\$742
Cape Fear River	28,852	\$148	2	\$69	\$156
<b>Total</b>	<b>380,892</b>	<b>\$2,502</b>	<b>23</b>	<b>\$916</b>	<b>\$2,082</b>

<sup>3</sup>Includes full time and part time jobs.

<sup>9</sup>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.

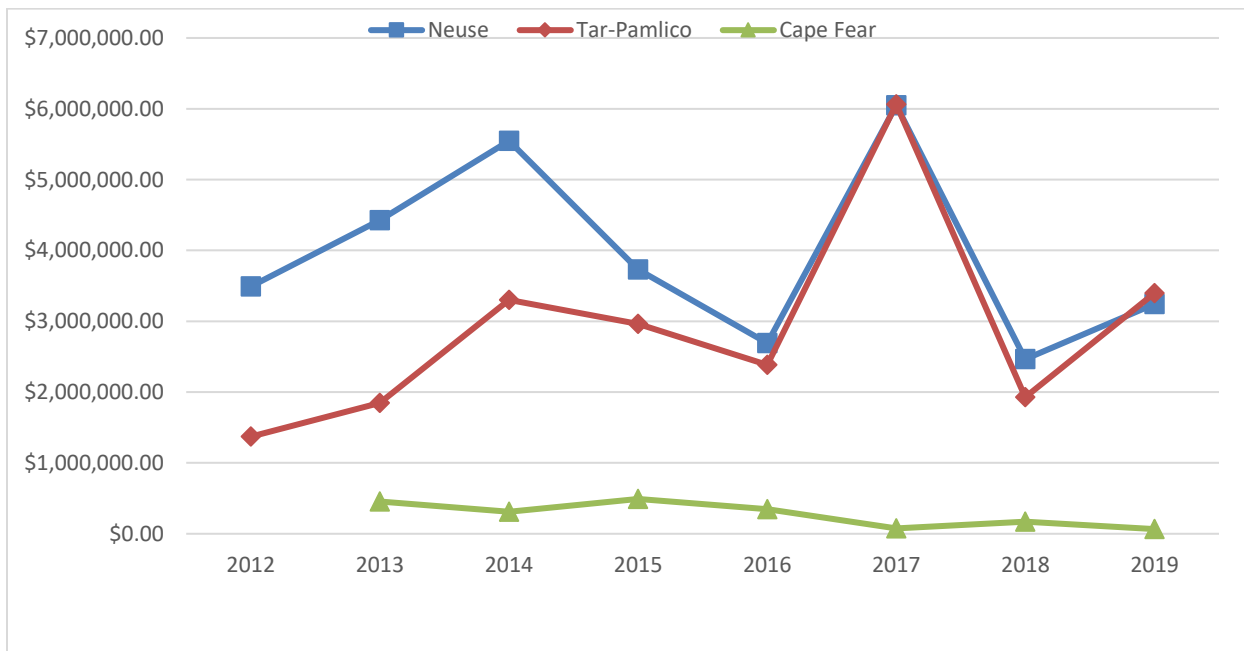
<sup>10</sup>Estimated fishing trip expenditures based on NCWRC CSMA creel surveys and NCDMF CSMA recreational fishing economic impact model.

<sup>11</sup>Economic impacts calculated using the NCDMF CSMA recreational fishing economic impact model and IMPLAN economic impact modeling software. Economic impact estimates are for the state economy of North Carolina.



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.

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