

**An Examination of Louisiana Department of Wildlife and Fisheries Trip Ticket Data
Regarding Commercial Fishers Who Landed Shrimp**

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Commercial Shrimp Harvesters: 2000 - 2018

This report uses data from the Louisiana Department of Wildlife and Fisheries (L.D.W.F.) Trip Ticket Program to assess the commercial fishing activity of resident and non-resident commercial fishers engaged in the harvest of any of several species of shrimp in Louisiana.

Under Louisiana law, for all commercial seafood physically landed in Louisiana, a record of the transaction at the point of first sales, called a “trip ticket”, must be submitted to the L.D.W.F. The data required for each trip ticket include, among other parameters, the date of the landings, the commercial fishing license of the fisher selling the product, the species of seafood landed, and the volume and dockside value thereof. These data have been collected and maintained by the L.D.W.F. Trip Ticket Program since the inception of the mandatory reporting requirement in the 1999-2000 fiscal year.

The data collected under the L.D.W.F. Trip Ticket Program pertain only to seafood physically landed within Louisiana. Thus these data may not provide a complete measure of the commercial activity within the state’s waters because they do not account for shrimp harvested off the Louisiana coast but landed in other states. Further, some moderate portion of the shrimp included in this report’s assessment of shrimp physically landed in Louisiana may have been pulled from the waters of other states. (Less than one-tenth of one percent of the shrimp landed in Louisiana was identified as coming from waters off the Alabama, Florida, Mississippi, or Texas coasts.)

The data source for this report included over 18,000 confidential records of cumulative annual landings of shrimp by all commercial fishers (anonymously identified by commercial fishing license numbers) with any records of shrimp landings in any particular year between 2000 and 2018. Variables from the Trip Ticket Program dataset included the year, cumulative volume and nominal (or current dollar) value of shrimp landings. Data identifying the ZIP code, parish or state of residence, and age of commercial fishers with shrimp landings were obtained from the L.D.W.F. commercial fishing license data banks.

The Trip Ticket Program regularly reviews and revises its databanks. Consequently the findings described in this report are preliminary and subject to change.

Number of Commercial Fishers Paying Commercial Shrimp Gear Fees

Commercial fishers who wish to harvest and land shrimp commercially in Louisiana must pay a commercial shrimp gear fee plus additional gear licenses for each piece of the most common types of shrimp-harvesting gear (shrimp trawls, butterfly nets, and skimmer nets). The enumeration of persons who paid the shrimp gear fee provides a count of the number of commercial fishers who possess the privilege to land shrimp commercially in Louisiana but not necessarily the number who actually participate in the commercial shrimp fishery. Data from the L.D.W.F. Trip Ticket Program’s databanks suggest that many individuals who pay the shrimp gear fee do not appear to harvest and land shrimp commercially.

The number of resident and non-resident commercial fishers paying the shrimp gear fees exceeded 10,000 per year in each of the first three years of the study period (Table 1) and slid over the next four years to 6,549 in 2006. The count remained below 6,400 thereafter.

Number of Commercial Fishers with Shrimp Landings

This research used the commercial fishing license numbers to identify commercial fisher with commercial landings of shrimp (also called “shrimp harvesters” or “shrimpers.”) in Louisiana in a given calendar year. The number of commercial shrimp harvesters declined during most of the 2000-2018 study period from its period peak of 6,931 in 2001 (Table 2). The number of shrimpers ranged between 3,200 and 3,600 between 2009 and 2016 then dropped over the last two years to a period low of 2,656 in 2018.

This delineation of shrimpers does not include any individuals who participated in harvesting shrimp commercially but who did not have landings reported under their commercial seafood license numbers. Thus, these counts may not include deckhands, crew members, or other employees whose labor contributed to harvesting and landing shrimp. They also do not include fishers who harvested shrimp off Louisiana’s coast but who landed them in other states. Furthermore, because this research could not determine whether fishers caught shrimp intentionally or incidentally in the pursuit of some other type of seafood, this definition of shrimpers may include some commercial fishers who harvest shrimp occasionally or incidentally but who are principally engaged in some other commercial fishery.

Table 1. Number of Commercial Fishers Paying Commercial Shrimp Gear Fees

Year	Resident Shrimp Gear Fee	Non-Resident Shrimp Gear Fee	Total
2000	9,901	839	10,740
2001	10,006	954	10,960
2002	9,596	843	10,439
2003	8,795	772	9,567
2004	7,688	642	8,330
2005	6,853	556	7,409
2006	6,087	462	6,549
2007	5,589	435	6,024
2008	5,101	414	5,515
2009	5,395	477	5,872
2010	5,839	463	6,302
2011	5,837	513	6,350
2012	5,581	496	6,077
2013	5,262	491	5,753
2014	5,467	557	6,024
2015	5,618	545	6,163
2016	5,466	548	6,014
2017	5,074	544	5,618
2018	4,672	467	5,139

Table 2. Number of Commercial Fishers Reporting Shrimp Landings in Louisiana

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Number	6,885	6,931	5,582	5,322	4,643	3,859	3,419	3,301	2,906	3,267
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Number	3,167	3,639	3,327	3,202	3,682	3,236	3,234	2,819	2,656	

Number of Commercial Fishing Trips with Shrimp Landings

The number of commercial trip ticket transactions with shrimp landings (or “shrimping trips”) was substantially higher at the beginning of the study period in 2000 (125,688 trips) than at the end of the period in 2018 (42,735 trips) (Table 3). The number of trips in 2018 (42,735) was the second lowest of the study period above only the 39,241 trips in 2010 (the year of the MSC 252 oil spill).

Volume of Commercial Shrimp Landings in Louisiana

The volume of commercial shrimp landings measured in pounds (whole weight) fluctuated throughout the study period under a variety of environmental and economic conditions. In the earlier portion of the study period, the volume of shrimp exceeded 100 million pounds in each of the first eight years from 2000 through 2007 (Table 4). Landings exceeded 100 million pounds in only three of the last ten years of the study period (2009, 2012, and 2014). The period minima occurred in 2008 (the year of hurricanes Gustav and Ike) and 2010 (the year of the MSC 252 oil spill).

Real Dockside Value of Shrimp Landings in Louisiana

The real dockside value of shrimp landings in Louisiana, calculated from the nominal value using the U.S. Bureau of Economic Analysis implicit price deflator with a base year of 2009, followed a generally downward trajectory from the period maximum of \$333.0 million in 2000 to \$110.3 million in the oil spill year of 2010 (Table 4). Real dockside value increased thereafter to \$177.7 million in 2013 and \$228.7 million in 2014 but dropped thereafter. The dockside value in 2018 was the lowest in inflation-adjusted dollars and the second lowest in non-adjusted dollars.

Age of Commercial Fishers Who Landed Shrimp in Louisiana

The age of each commercial fisher was determined using the year of birth in his or her commercial fishing license. The average age of a commercial shrimper in 2018 was 52.1 years old, a marked increase from the average of 42.9 years old at the beginning of the study period in 2000 (Table 5). Half of the commercial shrimpers of 2018 were 54 years old or older.

Table 3. Number of Commercial Fishing Trips with Shrimp Landings in Louisiana

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Number	125,688	108,851	79,144	78,244	74,027	49,676	56,068	54,837	42,771	51,368
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Number	39,241	50,219	48,953	53,606	63,496	45,814	53,379	44,257	42,735	

Table 4. Volume, Nominal Dockside Value, and Real Dockside Value of Commercial Shrimp Landings in Louisiana

Year	Volume	Nominal Dockside Value	Real Dockside Value
2000	147,284,285	\$259,971,602	\$332,955,433
2001	128,127,414	\$196,148,930	\$245,831,470
2002	107,242,984	\$141,191,666	\$174,203,166
2003	126,311,794	\$136,468,442	\$165,296,078
2004	134,116,228	\$139,662,698	\$164,735,431
2005	102,539,232	\$133,278,961	\$152,458,203
2006	138,359,578	\$148,469,511	\$164,837,916
2007	113,785,274	\$144,361,353	\$156,083,201
2008	96,568,391	\$142,186,111	\$150,796,597
2009	112,822,064	\$119,959,058	\$126,272,693
2010	74,375,719	\$105,978,030	\$110,267,434
2011	90,613,754	\$131,116,501	\$133,628,721
2012	100,958,449	\$145,555,548	\$145,555,548
2013	98,699,051	\$180,824,666	\$177,697,195
2014	115,692,598	\$237,099,350	\$228,683,786
2015	97,404,540	\$121,149,228	\$115,611,440
2016	100,539,565	\$140,146,187	\$132,288,264
2017	94,168,184	\$132,669,013	\$122,898,576
2018	97,127,897	\$120,004,054	\$108,709,171
Volume = Pounds		Real Value = Constant Inflation-Adjusted 2012 Dollars	

Table 5. Average and Median Age of Commercial Fishers Who Landed Shrimp in Louisiana

Year	Average	Median
2000	42.9	41
2001	43.2	42
2002	43.8	43
2003	44.6	44
2004	45.0	44
2005	46.1	45
2006	45.9	45
2007	46.4	46
2008	47.2	47
2009	47.0	47
2010	47.1	47
2011	47.5	48
2012	48.5	49
2013	49.0	50
2014	48.9	50
2015	49.5	51
2016	49.8	51
2017	50.7	52
2018	52.1	54

Place of Residence of Commercial Fishers Who Landed Shrimp in Louisiana

The place of residence for each commercial shrimper could be identified using the ZIP code in his or her commercial fishing license file. Because the LDWF Licensing Section does not maintain a permanent archive of commercial fishers but continuously updates the records as their addresses change, ZIP code records from past years may provide an inaccurate depiction of their places of residence. This report thus limits its examination of places of residence based on ZIP codes to three years (2015, 2017, and 2018), the years immediately preceding the years when these data were downloaded (2016, 2018, and 2019).

Shrimpers with landings in Louisiana resided in at least 30 parishes and a half dozen states. Two-thirds of the shrimpers of 2015, 2017, and 2018 hailed from four coastal parishes: Jefferson, Lafourche, Plaquemines, and Terrebonne (Table 6). Five to seven percent resided in Saint Bernard Parish, three percent in Orleans Parish, and two percent in neighboring Saint Tammany Parish. About three percent resided in Iberia or Saint Mary parishes on the central coast and seven percent in Calcasieu, Cameron, and Vermilion parish in the southwestern portion of the state. About four percent resided in other states, mainly Mississippi and Texas.

Average Volume of Shrimp per Commercial Fisher with Shrimp Landings

The average volume of shrimp landings per commercial shrimper fluctuated considerably throughout the study period. The period maximum (40,467.9 pounds in 2006) was more than twice the period minimum (18,484.1 pounds in 2001) (Table 7). Interestingly, the period minimum average per shrimper occurred in the year (2001) when the average number of shrimpers was at its highest (6,931) (Table 2).

In every year prior to 2006, the average volume per shrimper was less than 29,000 pounds and the median was less than 10,000 pounds. After 2006, the average volume per shrimper was 30,000 pounds or more in all but two years (2010 and 2011).

Average Real Dockside Value of Shrimp per Commercial Fisher with Shrimp Landings

The average real dockside value per commercial shrimper is a measure of the revenue commercial fishers earned from harvesting shrimp before expenses are subtracted (in inflation-adjusted 2012 dollars). It is not intended as a measure of profit or take-home income from commercial shrimp landings.

The period minimum average real dockside values (approximately \$31,000 per shrimper) were observed in the early portions of the study period in 2002 and 2003 when the numbers of shrimpers were relatively high. The average dockside value rose over the next few years to reach approximately \$52,000 per shrimper in 2008 (Table 8) then declined to about \$35,000 per shrimper in the oil spill year of 2010. The average dockside value climbed to a period maximum of \$62,000 per shrimper in 2014 then slid to about \$36,000 per shrimper in 2015 and \$41,000 per shrimper in 2016 and 2018.

Table 6. Parish or State of Residence for Commercial Fishers Who Landed Shrimp in Louisiana

Parish	2015	2017	2018	Parish	2015	2017	2018
Acadia	12	21	6	Saint James	12	8	7
	0.4%	0.7%	0.2%		0.4%	0.3%	0.3%
Ascension	9	6	8	Saint John the Baptist	18	10	9
	0.3%	0.2%	0.3%		0.6%	0.4%	0.3%
Assumption	8	3	3	Saint Landry	3	5	5
	0.2%	0.1%	0.1%		0.1%	0.2%	0.2%
Beauregard	6	4	3	Saint Martin	10	8	15
	0.2%	0.1%	0.1%		0.3%	0.3%	0.6%
Calcasieu	69	52	51	Saint Mary	67	59	49
	2.1%	1.8%	1.9%		2.1%	2.1%	1.8%
Cameron	64	61	58	Saint Tammany	66	69	59
	2.0%	2.2%	2.2%		2.0%	2.4%	2.2%
East Baton Rouge	9	7	8	Tangipahoa	27	20	17
	0.3%	0.2%	0.3%		0.8%	0.7%	0.6%
Evangeline	5	4	4	Terrebonne	786	743	685
	0.2%	0.1%	0.2%		24.3%	26.4%	25.8%
Iberia	34	31	16	Vermilion	97	85	75
	1.0%	1.1%	0.6%		3.0%	3.1%	2.8%
Jefferson	542	453	415	Washington	12	10	10
	16.7%	16.1%	15.6%		0.4%	0.4%	0.4%
Jefferson Davis	12	9	9	Other North & Central Louisiana*	13	6	7
	0.4%	0.3%	0.3%		0.4%	0.2%	0.3%
Lafayette	37	40	34	Other South Louisiana*	7	5	4
	1.1%	1.4%	1.3%		0.2%	0.2%	0.2%
Lafourche	325	265	279	Alabama	21	18	12
	10.0%	9.4%	10.5%		0.6%	0.6%	0.5%
Livingston	18	11	13	Florida	12	12	10
	0.6%	0.4%	0.5%		0.4%	0.4%	0.4%
Orleans	97	85	91	Mississippi	71	48	58
	3.0%	3.0%	3.4%		2.2%	1.7%	2.2%
Plaquemines	499	424	381	Texas	33	37	37
	15.4%	15.0%	14.3%		1.0%	1.3%	1.4%
Saint Bernard	169	178	185	Other States*	6	4	3
	5.2%	6.3%	7.0%		0.2%	0.1%	0.1%
Saint Charles	32	17	19	Unknown or Uncertain	28	1	11
	1.0%	0.6%	0.7%		0.9%	0.2%	0.4%

* Allen, Avoyelles, Bossier, Caddo, Catahoula, Concordia, De Soto, Grant, Ouachita, Rapides, Union, and Winn parishes
* East Feliciana, Iberville, West Baton Rouge, and West Feliciana parishes
* Arkansas, California, Georgia, Kentucky, Minnesota, Nevada, and South Carolina.

Table 7. Average and Median Volume of Shrimp among Commercial Fishers Who Landed Shrimp

Year	Average	Median	Standard Deviation	Coeff. of Variation
2000	21,392.1	6,362	32,653.2	152.64
2001	18,486.1	5,648	28,729.1	155.41
2002	19,212.3	6,077	30,967.4	161.19
2003	23,733.9	7,247	39,206.9	165.19
2004	28,885.7	8,371	47,633.6	164.90
2005	26,571.5	9,005	43,596.5	164.07
2006	40,467.9	13,152	65,720.0	162.40
2007	34,469.9	13,079	51,412.7	149.15
2008	33,230.7	12,293	48,789.7	146.82
2009	34,533.8	11,758	55,137.0	159.66
2010	23,484.6	9,229	36,625.8	155.96
2011	24,900.7	8,684	42,439.0	170.43
2012	30,345.2	10,533	50,749.5	167.24
2013	30,824.2	11,711	49,639.1	161.04
2014	31,421.1	11,262	47,286.8	150.49
2015	30,100.3	10,164	50,000.5	166.11
2016	31,088.3	11,072	50,211.4	161.51
2017	33,404.8	11,822	53,883.9	161.31
2018	36,569.2	13,948	54,141.6	148.05

Table 8. Average and Median Real Dockside Value of Shrimp among Commercial Fishers Who Landed Shrimp

Year	Average	Median	Standard Deviation	Coeff. of Variation
2000	\$48,360	\$11,372	89,231.5	184.52
2001	\$35,468	\$9,169	66,690.4	188.03
2002	\$31,208	\$8,195	61,635.0	197.50
2003	\$31,059	\$7,502	63,031.6	202.94
2004	\$35,480	\$7,847	73,350.5	206.74
2005	\$39,507	\$11,094	74,238.3	187.91
2006	\$48,212	\$12,495	91,215.2	189.19
2007	\$47,284	\$13,629	86,465.5	182.87
2008	\$51,891	\$14,744	95,029.1	183.13
2009	\$38,651	\$10,675	72,180.0	186.75
2010	\$34,818	\$11,654	65,113.5	187.01
2011	\$36,721	\$9,696	76,358.7	207.94
2012	\$43,750	\$12,526	83,042.3	189.81
2013	\$55,496	\$17,635	98,800.5	178.03
2014	\$62,109	\$20,053	104,924.0	168.94
2015	\$35,727	\$9,700	68,342.8	191.29
2016	\$40,905	\$12,475	73,132.3	178.78
2017	\$43,597	\$11,860	86,386.1	198.15
2018	\$40,930	\$12,275	75,349.3	184.09

Average Number of Commercial Fishing Trips with Shrimp Landings per Commercial Fisher with Shrimp Landings

The average number of shrimping trips per shrimper stood at a period maximum of 18.3 in 2000 but varied between 14 and 16 trips per shrimper for most of the remainder of the study period (Table 9). The average fell below this range in the hurricane year of 2005 and the oil spill year of 2010. The average rose to 17.2 trips per shrimper in 2014, when the average dockside value per shrimper was relatively high, but slipped afterwards to about 16 trips per shrimper in 2017 and 2018.

Average Volume per Trip with Shrimp Landings per Commercial Fisher with Shrimp Landings

An estimate of the average volume per trip was calculated for each shrimper as the product of the volume of shrimp landings divided by the number of shrimping trips completed during the year. The average volume per trip achieved minima (Table 10), in two early study period years with relatively large harvests and high numbers of commercial shrimpers (2001 and 2002). The average volume per trip rose 3,751.8 pounds per trip in 2006, the year after hurricanes Katrina and Rita. The average volume per trip climbed to 6,647.6 pounds per trip in the oil spill year of 2010, the year when the total number of shrimping trips reached a period minimum. The average ranged between 2,500 and 3,000 pounds per trip between 2011 and 2017 but increased to 3,182 pounds per trip in 2018.

Table 9. Average and Median Number of Shrimp-Harvesting Trips among Commercial Fishers Who Landed Shrimp

Year	Average	Median	Standard Deviation	Coeff. of Variation
2000	18.3	11	21.2	116.38
2001	15.7	10	18.2	115.68
2002	14.2	9	16.6	117.06
2003	14.7	9	18.0	122.35
2004	15.9	9	19.5	122.53
2005	12.9	8	14.8	115.00
2006	16.4	10	18.9	115.43
2007	16.6	10	19.9	119.94
2008	14.7	9	18.1	123.03
2009	15.7	10	19.1	121.35
2010	12.4	7	18.0	145.66
2011	13.8	8	17.3	125.30
2012	14.7	9	18.4	125.32
2013	16.7	11	20.8	124.08
2014	17.2	12	20.3	117.77
2015	14.2	9	18.7	132.31
2016	16.5	10	21.5	130.09
2017	15.7	10	21.9	139.55
2018	16.1	11	20.1	125.23

Table 10. Average and Median Shrimp Volume per Trip

Year	Average	Median	Standard Deviation	Coeff. of Variation
2000	4,476.5	647	12,928.2	288.80
2001	1,406.6	492	2,515.5	178.83
2002	1,741.7	548	3,360.1	192.92
2003	2,213.1	652	4,635.3	209.45
2004	2,448.7	740	5,115.2	208.89
2005	2,993.6	895	6,380.0	213.12
2006	3,751.8	987	8,759.5	233.48
2007	3,314.5	945	7,255.8	218.91
2008	3,380.3	1,052	7,203.5	213.10
2009	3,429.2	906	8,206.2	239.30
2010	6,647.6	1,229	17,194.5	258.66
2011	2,637.5	815	5,954.6	225.77
2012	2,887.9	894	6,330.7	219.21
2013	2,734.0	846	6,159.7	225.30
2014	2,540.0	822	5,468.7	215.30
2015	2,957.8	930	6,335.2	214.19
2016	2,720.9	832	5,922.4	217.66
2017	2,884.1	991	6,073.2	210.57
2018	3,182.0	1,140	6,498.9	204.24

Average Real Dockside Value per Pound of Shrimp

An estimate of the real dockside value per pound of shrimp was calculated for each shrimper as the product of the real value of shrimp divided by the volume of shrimp landings. The average real dockside value per pound fell from a period maximum of \$1.93 per pound in 2000 to \$1.04 per pound in 2004 (Table 11). The average real dockside value was relatively high in years of low harvest: the hurricane year of 2005 (\$1.31 per pound), the hurricane year of 2008 (\$1.32 per pound), and the oil spill year of 2010 (\$1.38 per pound). In the year after the M.S.C. oil spill, the value dropped to \$1.26 per pound in 2011. It later rose to \$1.63 per pound in 2013 and \$1.84 per pound in 2014 then dropped to \$1.03 per pound in 2018.

Variation from the Average for Shrimp Production Parameters

Comparisons of the statistics for the volume and dockside value of shrimp landings (Tables 7 and 8) reveal that the averages for these parameters were usually two to three times larger than the medians, a result of the dispersed and uneven distribution of the harvesting activity within the population. In every year, a large number of commercial fishers harvested relatively small amounts of shrimp while a relatively small number of commercial fishers landed large amounts.

Table 11. Average and Median Real Dockside Value per Pound of Shrimp

Year	Average	Median
2000	\$1.93	\$1.76
2001	\$1.73	\$1.60
2002	\$1.40	\$1.32
2003	\$1.11	\$0.99
2004	\$1.04	\$0.91
2005	\$1.31	\$1.27
2006	\$1.04	\$0.91
2007	\$1.18	\$1.07
2008	\$1.32	\$1.16
2009	\$1.00	\$0.92
2010	\$1.38	\$1.20
2011	\$1.26	\$1.10
2012	\$1.27	\$1.18
2013	\$1.63	\$1.52
2014	\$1.84	\$1.74
2015	\$1.06	\$0.91
2016	\$1.22	\$1.13
2017	\$1.12	\$0.99
2018	\$1.03	\$0.85

Further evidence of wide data dispersal offered by large standard deviation and coefficient of variation measures¹ suggests that shrimping activity varies so widely that any single measure of central tendency, such as the average or median, is somewhat limited in its ability to depict a “typical” commercial shrimp harvester. The average volume of shrimp landings in 2018 (36,569 pounds) gives a somewhat distorted view of the quantity of shrimp that most shrimpers landed. It would be inaccurate to say that most shrimp harvesters landed about 36 thousand pounds of shrimp in that year when more than two-thirds of the shrimpers caught less than that amount. A more detailed examination of the distribution of commercial shrimp-harvesting activity that gives a more complete picture of the population of commercial shrimp harvesters will be the topic of the next section of the report.

¹ The coefficient of variation, the product of the standard deviation divided by the average times one hundred, puts the standard deviation in context relative to the mean.

**Commercial Shrimp Activities by Commercial Fishers in
Shrimp Volume Categories**

Commercial Shrimp Harvesting Activities by Shrimp Volume Categories

To illustrate the diversity among commercial shrimpers, the population of commercial fishers who harvested shrimp in every year during the study period was divided into four categories defined by the volume of each shrimpers' yearly harvests. The ranges for each category were determined by examining the shrimp landings by every individual who landed shrimp between 2012 and 2015 and dividing the population into four groups of roughly equal size. Commercial shrimpers with less than 1,800 pounds of shrimp in a particular year were placed in the small shrimp volume category. Those with 1,800 to 10,499 pounds of shrimp were placed in the lower middle shrimp volume category and those with 10,500 to 40,000 pounds in the upper middle shrimp volume category. Shrimpers who harvested more than 40,000 pounds were classified in the large shrimp volume category.

Between 2000 and 2003, when the number of shrimpers was relatively large, 29 to 32 percent of each year's shrimpers were in the small volume category and 15 to 19 percent were in the large volume category. Over the next six years (except for the hurricane year of 2005), the share of the year's shrimper population in each category normally fluctuated within a fairly narrow band between 23 and 29 percent. In the oil spill year of 2010 and the following year, the percentage of the year's shrimpers in the large volume category dropped to about 19 percent, the percentage in the lower middle volume category rose to about 28 percent, and percentage in the upper middle volume category to 27 or 28 percent.

In 2018, approximately 22 percent of the year's 2,656 shrimpers were in the small volume category, about 30 percent were in the large volume category, and about 24 percent were in each of the lower- and Upper Middle volume categories (Table 12). This was somewhat different from the previous five years when roughly one fourth of each year's shrimpers (23.5 to 26.7 percent) were fell into each of the four volume categories.

Shrimping Trips by Commercial Shrimp Volume Categories

The number of commercial fishing trips with shrimp landings (or shrimping trips) was typically unevenly distributed among the shrimp volume categories. In most years since 2003, shrimpers in the small volume category collectively completed less than six percent of all trips while shrimpers in the large volume category completed one third to one half (Table 13). In 2018, shrimpers in the small volume category took about four percent of the year's 42,357 shrimping trips, shrimpers in the lower middle volume category took about 15 percent, shrimpers in the upper middle volume category took about 32 percent of the trips, and shrimpers in the large volume category took almost half.

Volume and Dockside Value of Shrimp by Shrimp Volume Category

The examination of the volume and dockside value of shrimp landed by shrimpers in each of the volume categories shows that a minority of shrimpers in any given year (those in the large volume category) accounted for a large majority of commercial shrimp landings in Louisiana. At the same time, a group of similar size (shrimpers in the small volume category) typically landed less than one percent of the shrimp by volume and value.

Table 12. Number of Commercial Fishers and Percentage of All Commercial Fishers Who Landed Shrimp in Each Shrimp Volume Category: 2000 – 2018

Year	Category	Small	Lower Middle	Upper Middle	Large	Total
2000	Number	2,192	1,771	1,632	1,290	6,885
	Percent	31.8%	25.7%	23.7%	18.7%	
2001	Number	2,249	1,899	1,703	1,080	6,931
	Percent	32.4%	27.4%	24.6%	15.6%	
2002	Number	1,780	1,524	1,413	865	5,582
	Percent	31.9%	27.3%	25.3%	15.5%	
2003	Number	1,552	1,419	1,315	1,036	5,322
	Percent	29.2%	26.7%	24.7%	19.5%	
2004	Number	1,301	1,177	1,075	1,090	4,643
	Percent	28.0%	25.4%	23.2%	23.5%	
2005	Number	975	1,054	1,027	803	3,859
	Percent	25.3%	27.3%	26.6%	20.8%	
2006	Number	775	810	832	1,002	3,419
	Percent	22.7%	23.7%	24.3%	29.3%	
2007	Number	737	777	849	938	3,301
	Percent	22.3%	23.5%	25.7%	28.4%	
2008	Number	659	716	725	806	2,906
	Percent	22.7%	24.6%	25.0%	27.7%	
2009	Number	816	767	781	903	3,267
	Percent	25.0%	23.5%	23.9%	27.6%	
2010	Number	776	893	893	605	3,167
	Percent	24.5%	28.2%	28.2%	19.1%	
2011	Number	938	1,012	975	714	3,639
	Percent	25.8%	27.8%	26.8%	19.6%	
2012	Number	847	816	854	810	3,327
	Percent	25.5%	24.5%	25.7%	24.3%	
2013	Number	751	784	855	812	3,202
	Percent	23.5%	24.5%	26.7%	25.4%	
2014	Number	911	890	868	1,013	3,682
	Percent	24.8%	24.2%	23.6%	27.5%	
2015	Number	813	823	817	783	3,236
	Percent	25.1%	25.4%	25.3%	24.2%	
2016	Number	814	783	821	816	3,234
	Percent	25.2%	24.2%	25.4%	25.2%	
2017	Number	687	666	731	735	2,819
	Percent	25.2%	23.6%	25.9%	26.1%	
2018	Number	586	628	649	793	2,656
	Percent	22.1%	23.6%	24.4%	29.9%	

Small Volume Category = Commercial fishers with less than 1,800 pounds of shrimp landings
Lower Middle Volume Category = Commercial fishers with 1,800 to 10,499 pounds of shrimp landings
Upper Middle Volume Category = Commercial fishers with 10,500 to 40,000 pounds of shrimp landings
Large Volume Category = Commercial fishers with more than 40,000 pounds of shrimp landings

Table 13. Cumulative Number of Trips with Shrimp Landings and Percentage of the Total Taken by Commercial Fishers in Each Volume Category: 2000-2018

Year	Category	Small	Lower Middle	Upper Middle	Large	Total
2000	Number	32,906	30,721	32,894	29,167	125,688
	Percent	26.2%	24.4%	26.2%	23.2%	
2001	Number	8,021	23,828	45,113	31,889	108,851
	Percent	7.4%	21.9%	41.4%	29.3%	
2002	Number	5,777	18,698	33,221	21,448	79,144
	Percent	7.3%	23.6%	42.0%	27.1%	
2003	Number	4,621	15,619	31,264	26,740	78,244
	Percent	5.9%	20.0%	40.0%	34.2%	
2004	Number	3,897	12,072	26,215	31,843	74,027
	Percent	5.3%	16.3%	35.4%	43.0%	
2005	Number	2,855	10,398	19,185	17,238	49,676
	Percent	5.7%	20.9%	38.6%	34.7%	
2006	Number	2,040	7,990	17,052	28,986	56,068
	Percent	3.6%	14.3%	30.4%	51.7%	
2007	Number	2,045	7,746	18,590	26,456	54,837
	Percent	3.7%	14.1%	33.9%	48.2%	
2008	Number	1,721	6,285	13,447	21,318	42,771
	Percent	4.0%	14.7%	31.4%	49.8%	
2009	Number	2,235	7,585	16,739	24,809	51,368
	Percent	4.4%	14.8%	32.6%	48.3%	
2010	Number	9,306	10,899	11,622	7,414	39,241
	Percent	23.7%	27.8%	29.6%	18.9%	
2011	Number	2,720	10,070	19,298	18,131	50,219
	Percent	5.4%	20.1%	38.4%	36.1%	
2012	Number	2,279	7,982	16,567	22,125	48,953
	Percent	4.7%	16.3%	33.8%	45.2%	
2013	Number	2,091	8,928	19,148	23,439	53,606
	Percent	3.9%	16.7%	35.7%	43.7%	
2014	Number	2,952	10,283	21,092	29,169	63,496
	Percent	4.7%	16.2%	33.2%	45.9%	
2015	Number	2,138	7,832	16,319	19,525	45,814
	Percent	4.7%	17.1%	35.6%	42.6%	
2016	Number	2,271	9,022	19,082	23,004	53,379
	Percent	4.3%	16.9%	35.7%	43.1%	
2017	Number	1,896	6,782	15,970	19,609	44,257
	Percent	4.3%	15.3%	36.1%	44.3%	
2018	Number	1,656	6,353	13,474	21,252	42,357
	Percent	3.9%	14.9%	31.5%	49.7%	

In 2018, for example, shrimpers in the small volume category, whose numbers represented 22 percent of the year's shrimper population, collectively harvested only 0.4 percent of the volume (Table 14) and dockside value (Table 15) of shrimp landed in Louisiana that year. The collective landings of shrimp harvested by small volume category shrimpers exceeded one percent of the volume and value of the state's shrimp landings in only one year (2001) during the study period.

Commercial shrimpers in the Lower Middle volume category landed 3.5 percent of the volume and 3.1 percent of the dockside value of Louisiana's commercial shrimp landings in 2018. In earlier years, the category's share of the total volume ranged from 3.1 percent in 2006 to 7.4 percent in 2001.

Shrimpers in the Upper Middle volume category accounted for 15 percent of the volume and 13 percent of the dockside value of Louisiana's commercial shrimp harvest. In previous years, the category's shrimpers landed between 13.5 percent (2006) and 29.9 percent of the yearly harvest.

Commercial shrimpers in the large volume category accounted for a disproportionately large share of the state's shrimp landings. Though only 29.9 percent of the state's shrimper population in 2018, shrimpers in this category landed 81 percent of the volume and 83 percent of the dockside value of the year's total commercial shrimp harvest. The proportion of the year's shrimp volume harvested by shrimpers in this category ranged from 66.8 percent in 2010 to 83.0 percent in 2006.

Descriptive Statistics for Selected Characteristics of Commercial Fishers by Shrimp Volume Category

This section presents averages for each of the shrimp harvest variables included in the trip ticket data that were examined in this report (number of trips, volume, and dockside value) for shrimpers in each of the shrimp volume categories for every year in the study period. It also uses data from the L.D.W.F. commercial seafood license database to present statistics for age and place of residence.

Commercial Fishers in the Small Volume Category

The average year-total volume of shrimp harvested in 2018 by commercial fishers in the small volume category (Table 16) was about 676 pounds, over 200 pounds below the category midpoint (900 pounds). Throughout the study period, the category average ranged between 602 and 695 pounds.

The average dockside value for small volume category shrimpers was \$722 (Table 17). In previous years, the average dockside value varied between \$630 in 2004 and \$1,167 in 2014.

The average number of shrimping trips among small volume category shrimpers was 2.8 trips in 2018 and generally ranged between two to four trips per year (Table 18). The average volume per trip for a shrimper in the small volume category was 336.3 pounds per trip in 2018 (Table 19) and generally ranged between 250 pounds per trip and 350 pounds per trip. The average volume per trip was lowest in the two years (2000 and 2010) when the average number of trips for this volume category was the highest.

Table 14. Cumulative Volume of Shrimp Landings and Percentage of the Total Caught by Commercial Fishers in Each Volume Category: 2000-2018

Year	Category	Small	Lower Middle	Upper Middle	Large	Total
2000	Pounds	1,319,850	8,892,224	36,560,747	100,511,465	147,284,285
	Percent	0.9%	6.0%	24.8%	68.2%	
2001	Pounds	1,367,656	9,458,095	38,297,114	79,004,545	128,127,414
	Percent	1.1%	7.4%	29.9%	61.7%	
2002	Pounds	1,106,978	7,806,963	30,776,363	67,552,679	107,242,984
	Percent	1.0%	7.3%	28.7%	63.0%	
2003	Pounds	987,590	7,229,124	29,261,505	88,833,575	126,311,794
	Percent	0.8%	5.7%	23.2%	70.3%	
2004	Pounds	834,815	5,923,630	24,345,253	103,012,530	134,116,228
	Percent	0.6%	4.4%	18.2%	76.8%	
2005	Pounds	630,440	5,512,461	23,238,980	73,157,350	102,539,232
	Percent	0.6%	5.4%	22.7%	71.3%	
2006	Pounds	531,449	4,235,584	18,721,558	114,870,987	138,359,578
	Percent	0.4%	3.1%	13.5%	83.0%	
2007	Pounds	497,123	4,005,354	19,130,251	90,152,545	113,785,274
	Percent	0.4%	3.5%	16.8%	79.2%	
2008	Pounds	457,998	3,828,492	16,398,508	75,883,393	96,568,391
	Percent	0.5%	4.0%	17.0%	78.6%	
2009	Pounds	556,412	4,067,236	17,862,304	90,336,111	112,822,064
	Percent	0.5%	3.6%	15.8%	80.1%	
2010	Pounds	534,996	4,698,518	19,474,304	49,667,902	74,375,719
	Percent	0.7%	6.3%	26.2%	66.8%	
2011	Pounds	641,253	5,322,303	21,969,357	62,680,841	90,613,754
	Percent	0.7%	5.9%	24.2%	69.2%	
2012	Pounds	579,242	4,149,221	19,294,236	76,935,749	100,958,449
	Percent	0.6%	4.1%	19.1%	76.2%	
2013	Pounds	496,849	4,047,383	19,614,845	74,539,974	98,699,051
	Percent	0.5%	4.1%	19.9%	75.5%	
2014	Pounds	604,509	4,712,048	20,010,883	90,365,158	115,692,598
	Percent	0.5%	4.1%	17.3%	78.1%	
2015	Pounds	538,562	4,218,796	18,694,747	73,952,434	97,404,540
	Percent	0.6%	4.3%	19.2%	75.9%	
2016	Pounds	497,214	4,060,592	19,053,372	76,928,388	100,539,565
	Percent	0.5%	4.0%	19.0%	76.5%	
2017	Pounds	459,614	3,371,668	16,985,930	73,350,971	94,168,184
	Percent	0.5%	3.6%	18.0%	77.9%	
2018	Pounds	396,105	3,372,844	14,898,085	78,460,863	97,127,897
	Percent	0.4%	3.5%	15.3%	80.8%	

Table 15. Cumulative Real Dockside Value of Shrimp Landings and Percentage of the Total Caught by Commercial Fishers in Each Volume Category: 2000-2018

Year	Category	Small	Lower Middle	Upper Middle	Large	Total
2000	Dollars	\$2,312,833	\$16,846,473	\$72,700,375	\$241,095,753	\$332,955,433
	Percent	0.7%	5.1%	21.8%	72.4%	
2001	Dollars	\$2,219,519	\$16,241,244	\$67,140,454	\$160,230,252	\$245,831,470
	Percent	0.9%	6.6%	27.3%	65.2%	
2002	Dollars	\$1,431,674	\$10,820,888	\$44,533,738	\$117,416,866	\$174,203,166
	Percent	0.8%	6.2%	25.6%	67.4%	
2003	Dollars	\$1,003,767	\$7,890,968	\$32,272,515	\$124,128,828	\$165,296,078
	Percent	0.6%	4.8%	19.5%	75.1%	
2004	Dollars	\$820,107	\$5,933,564	\$25,119,749	\$132,862,012	\$164,735,431
	Percent	0.5%	3.6%	15.2%	80.7%	
2005	Dollars	\$781,339	\$6,877,260	\$30,593,359	\$114,206,245	\$152,458,203
	Percent	0.5%	4.5%	20.1%	74.9%	
2006	Dollars	\$521,321	\$4,215,202	\$18,923,730	\$141,177,664	\$164,837,916
	Percent	0.3%	2.6%	11.5%	85.6%	
2007	Dollars	\$561,795	\$4,371,984	\$22,309,562	\$128,839,860	\$156,083,201
	Percent	0.4%	2.8%	14.3%	82.5%	
2008	Dollars	\$538,543	\$4,763,918	\$21,709,519	\$123,784,617	\$150,796,597
	Percent	0.4%	3.2%	14.4%	82.1%	
2009	Dollars	\$528,849	\$3,947,148	\$17,706,250	\$104,090,445	\$126,272,693
	Percent	0.4%	3.1%	14.0%	82.4%	
2010	Dollars	\$704,584	\$6,383,436	\$26,621,797	\$76,557,616	\$110,267,434
	Percent	0.6%	5.8%	24.1%	69.4%	
2011	Dollars	\$739,784	\$6,406,050	\$28,422,941	\$98,059,945	\$133,628,721
	Percent	0.6%	4.8%	21.3%	73.4%	
2012	Dollars	\$660,567	\$5,112,106	\$24,994,790	\$114,788,085	\$145,555,548
	Percent	0.5%	3.5%	17.2%	78.9%	
2013	Dollars	\$736,412	\$6,338,746	\$32,429,790	\$138,192,247	\$177,697,195
	Percent	0.4%	3.6%	18.2%	77.8%	
2014	Dollars	\$1,063,113	\$8,531,488	\$36,316,378	\$182,772,807	\$228,683,786
	Percent	0.5%	3.7%	15.9%	79.9%	
2015	Dollars	\$534,695	\$4,415,326	\$19,499,572	\$91,161,847	\$115,611,440
	Percent	0.5%	3.8%	16.9%	78.9%	
2016	Dollars	\$592,229	\$4,819,232	\$23,016,282	\$103,860,522	\$132,288,264
	Percent	0.4%	3.6%	17.4%	78.5%	
2017	Dollars	\$474,919	\$3,683,674	\$18,161,120	\$100,578,863	\$122,898,576
	Percent	0.4%	3.0%	14.8%	81.8%	
2018	Dollars	\$423,314	\$3,326,236	\$14,294,180	\$90,665,440	\$108,709,171
	Percent	0.4%	3.1%	13.1%	83.4%	

Table 16. Average Volume of Shrimp Landed by Commercial Fishers in Each Shrimp Volume Category: 2000 – 2018

Year	Small	Lower Middle	Upper Middle	Large
2000	602.1	5,021.0	22,402.4	77,915.9
2001	608.1	4,980.1	22,488.0	73,152.4
2002	621.9	5,122.7	21,780.9	78,017.1
2003	636.3	5,094.5	22,252.1	85,746.7
2004	641.7	5,032.8	22,646.8	94,506.9
2005	646.6	5,230.0	22,628.0	91,105.0
2006	685.7	5,229.1	22,501.9	114,641.7
2007	674.5	5,154.9	22,532.7	96,111.5
2008	695.0	5,347.1	22,618.6	94,148.1
2009	681.9	5,302.8	22,871.1	100,040.0
2010	689.4	5,261.5	21,807.7	82,095.7
2011	683.9	5,084.8	22,532.7	87,788.3
2012	683.7	5,084.8	22,592.8	94,982.4
2013	661.6	5,162.5	22,941.3	91,798.0
2014	663.6	5,294.4	23,054.0	89,205.5
2015	662.4	5,126.1	22,882.2	94,447.6
2016	610.8	5,185.9	23,207.5	94,275.0
2017	669.0	5,062.6	23,236.6	99,797.2
2018	675.9	5,370.8	22,955.5	98,941.8
Volume = Pounds				

The average age of a small volume category shrimper in 2018 was 50.7 years old (Table 21), an increase from the category’s average age of 42.8 in 2000. The majority of small volume category shrimpers in 2018 resided in three parishes: Terrebonne, Plaquemines, and Jefferson (Table 24). Another 9.9 percent lived in Lafourche Parish.

Commercial Fishers in the Lower Middle Volume Category

In 2018, the average volume of shrimp among shrimpers in the lower middle volume category was 5,370.8 pounds (Table 16), about 1,000 pounds less than the category mid-point (6,150 pounds). The category average was between 5,000 and 5,300 pounds throughout the study period.

The average real dockside value for shrimpers in the lower middle volume category was \$5,297 per shrimper in 2018 (Table 17). In previous years, the average dockside value varied from about \$5,000 in 2004 and \$9,600 in 2000 and 2014.

The average number of shrimping trips among shrimpers in the lower middle volume category in 2018 was 10.1 trips (Table 18), a value similar to that observed among shrimpers in this category for every year since 2004. The average volume per trip in 2018, 1,157.5 pounds per trip, was also similar to the average volume per trip in previous years (Table 19).

Table 17. Average Real Dockside Value of Shrimp Landed by Commercial Fishers in Each Shrimp Volume Category: 2000 – 2018

Year	Small	Lower Middle	Upper Middle	Large
2000	\$1,055	\$9,512	\$44,547	\$186,896
2001	\$987	\$8,553	\$39,425	\$148,361
2002	\$804	\$7,100	\$31,517	\$135,742
2003	\$647	\$5,561	\$24,542	\$119,815
2004	\$630	\$5,041	\$23,367	\$121,892
2005	\$801	\$6,525	\$29,789	\$142,224
2006	\$673	\$5,204	\$22,745	\$140,896
2007	\$762	\$5,627	\$26,277	\$137,356
2008	\$817	\$6,654	\$29,944	\$153,579
2009	\$648	\$5,146	\$22,671	\$115,272
2010	\$908	\$7,148	\$29,812	\$126,542
2011	\$789	\$6,330	\$29,152	\$137,339
2012	\$780	\$6,265	\$29,268	\$141,714
2013	\$981	\$8,085	\$37,930	\$170,188
2014	\$1,167	\$9,586	\$41,839	\$180,427
2015	\$658	\$5,365	\$23,867	\$116,426
2016	\$728	\$6,155	\$28,034	\$127,280
2017	\$691	\$5,531	\$24,844	\$136,842
2018	\$722	\$5,297	\$22,025	\$114,332

The average age of a shrimper in the lower middle volume category (Table 21) in 2018 (53.2 years old) was about 11 years older than the category average in 2000 (42.8 years old). The majority resided in Terrebonne, Plaquemines, or Jefferson parish (Table 24).

Commercial Fishers in the Upper Middle Volume Category

The average volume of shrimp among shrimpers in the upper middle volume category was 22,955.5 pounds in 2018 (Table 16), about 2,000 pounds below the category mid-point (25,250 pounds). The average remained below the category mid-point in every other year in the study period. The average real dockside value of shrimp for shrimpers in this category in 2018 was \$22,025 (Table 17).

The average number of shrimping trips among shrimpers in the upper middle volume category (Table 18) generally ranged between 18.5 and 26.5 trips throughout the study period (except for the oil spill year of 2010). The average volume per trip in this category (Table 19) varied between 2,100 and 2,900 pounds per trip in 15 of the previous 16 years, except for the 2010 oil spill year when the category average jumped to 5,660.5 pounds per trip (coinciding with the aforementioned decline in the average number of trips.)

Table 18. Average Number of Shrimp-Landing Trips by Commercial Fishers in Each Shrimp Volume Category: 2000 – 2018

Year	Small	Lower Middle	Upper Middle	Large
2000	15.0	17.3	20.2	22.6
2001	3.6	12.5	26.5	29.5
2002	3.2	12.3	23.5	23.5
2003	3.0	11.0	23.8	25.8
2004	3.0	10.3	24.4	29.2
2005	2.9	9.9	18.7	21.5
2006	2.6	9.9	20.5	28.9
2007	2.8	10.0	21.9	28.2
2008	2.6	8.8	18.5	26.4
2009	2.7	9.9	21.4	27.5
2010	12.0	12.2	13.0	12.3
2011	2.9	10.0	19.8	25.4
2012	2.7	9.8	19.4	27.3
2013	2.8	11.4	22.4	28.9
2014	3.2	11.6	24.3	28.8
2015	2.6	9.5	20.0	24.9
2016	2.8	11.5	23.2	28.2
2017	2.8	10.2	21.8	26.7
2018	2.8	10.1	20.8	26.8

The average age of an upper middle volume shrimper in 2018 was 52.2 years (Table 21). Nearly fifty-eight percent of this category’s shrimpers in 2018 resided in Terrebonne, Jefferson, and Plaquemines parishes (Table 24).

Commercial Fishers in the Large Volume Category

The average volume of shrimp harvested by shrimpers in the large volume category in 2018 was 98,941.8 pounds (Table 16). The averages for shrimpers in this category in previous years varied from 73,152.4 pounds in 2002 to 114,641.7 pounds in 2006. Throughout the period, the average in the large volume category was at least three times larger and often four times larger than average landings for those in the upper middle volume category.

The average number of shrimp-harvesting trips taken by large volume category shrimpers in 2018 was 26.8 trips (Table 18) while the average volume per trip was 7,155.3 pounds (Table 19). In previous years, the category average trip count generally ranged between 22 and 29 trips. Since 2003, the average volume per trip estimates ranged between 6,000 pounds per trip and 9,000 pounds per trip except for a spike to 23,842 pounds per trip in the oil spill year of 2010 when the average trip count was at a period low of 12.3 trips.

Table 19. Average Volume of Shrimp per Shrimp-Landing Trip by Commercial Fishers in Each Shrimp Volume Category: 2000 – 2018

Year	Small	Lower Middle	Upper Middle	Large
2000	174.6	1,272.5	5,318.3	15,119.94
2001	229.6	907.4	1,784.7	4,138.6
2002	251.5	977.7	2,115.2	5,544.0
2003	280.6	976.3	2,183.0	6,840.4
2004	300.2	1,113.1	2,298.9	6,603.0
2005	306.4	1,089.8	2,746.5	9,071.3
2006	333.4	1,017.4	2,865.7	9,341.9
2007	331.1	1,038.5	2,565.5	8,221.7
2008	350.2	1,094.7	2,883.2	8,335.3
2009	317.6	973.8	2,506.4	9,124.7
2010	200.3	1,588.1	5,660.5	23,842.1
2011	321.8	989.2	2,674.5	7,965.4
2012	332.5	1,018.1	2,756.5	7,582.2
2013	305.6	910.3	2,265.6	7,234.2
2014	264.2	999.9	2,262.4	6,177.6
2015	334.5	1,080.4	2,506.7	8,125.4
2016	294.6	966.5	2,282.4	7,266.1
2017	331.8	1,050.1	2,170.0	7,641.7
2018	336.3	1,157.5	2,855.6	7,155.3

Table 20. Average Real Dockside Value per Pound of Shrimp for Commercial Fishers in Each Shrimp Volume Category: 2000 – 2018

Year	Small	Lower Middle	Upper Middle	Large
2000	\$1.71	\$1.88	\$1.98	\$2.30
2001	\$1.61	\$1.71	\$1.75	\$1.95
2002	\$1.26	\$1.38	\$1.44	\$1.66
2003	\$1.01	\$1.07	\$1.10	\$1.32
2004	\$0.96	\$0.99	\$1.03	\$1.21
2005	\$1.22	\$1.25	\$1.31	\$1.51
2006	\$0.98	\$1.00	\$1.00	\$1.15
2007	\$1.12	\$1.09	\$1.15	\$1.34
2008	\$1.19	\$1.23	\$1.31	\$1.53
2009	\$0.95	\$0.98	\$0.98	\$1.08
2010	\$1.31	\$1.37	\$1.37	\$1.48
2011	\$1.12	\$1.19	\$1.30	\$1.48
2012	\$1.16	\$1.22	\$1.28	\$1.43
2013	\$1.52	\$1.56	\$1.64	\$1.81
2014	\$1.79	\$1.80	\$1.81	\$1.95
2015	\$0.96	\$1.05	\$1.04	\$1.18
2016	\$1.16	\$1.18	\$1.21	\$1.31
2017	\$1.03	\$1.10	\$1.06	\$1.26
2018	\$1.09	\$0.98	\$0.97	\$1.07

Table 21. Average Age of Shrimp-Landing Commercial Fishers in Each Shrimp Volume Category: 2000 – 2018

Year	Small	Lower Middle	Upper Middle	Large
2000	42.8	42.8	44.0	41.9
2001	43.0	43.6	43.9	42.1
2002	44.0	44.5	43.7	42.3
2003	44.5	45.3	45.0	43.4
2004	44.7	45.5	45.6	44.4
2005	45.7	47.0	46.5	44.7
2006	46.0	46.3	46.8	44.9
2007	46.0	47.1	46.9	45.6
2008	47.7	47.7	47.7	46.1
2009	46.2	47.2	47.9	46.9
2010	47.2	47.3	47.5	46.0
2011	47.0	48.2	47.8	46.8
2012	48.5	48.5	49.1	47.9
2013	48.7	48.8	49.7	48.6
2014	47.6	48.8	49.9	49.3
2015	48.6	49.2	50.8	49.4
2016	48.9	50.2	50.1	49.9
2017	49.8	50.9	51.6	50.3
2018	50.7	53.2	52.2	52.1

The average real dockside value for shrimpers in the large volume category in 2018 (\$114,332) was a category study period minimum (Table 17). The period category maximum average twice exceeded \$180,000 (2000 and 2013).

The average age of a large volume category shrimper (Table 21) was 52.1 years old in 2018, a decade older than the average age in 2000 (41.9 years old). Almost two-thirds resided in Jefferson, Plaquemines, and Terrebonne parishes (Table 24).

Table 22. Parish or State of Residence for Commercial Fishers in Each Volume Category in 2015

		Small	Lower Middle	Upper Middle	Large
Calcasieu	Number	20	24	17	8
	Percent	2.5%	2.9%	2.1%	1.0%
Cameron	Number	17	17	24	6
	Percent	2.1%	2.1%	2.9%	0.8%
Jefferson	Number	104	107	147	184
	Percent	12.8%	13.0%	18.0%	23.5%
Lafayette	Number	4	5	8	20
	Percent	0.5%	0.6%	1.0%	2.6%
Lafourche	Number	87	87	75	76
	Percent	10.7%	10.6%	9.2%	9.7%
Livingston	Number	4	9	5	0
	Percent	0.5%	1.1%	0.6%	0.0%
Orleans	Number	13	16	31	37
	Percent	1.6%	1.9%	3.8%	4.7%
Plaquemines	Number	85	114	139	161
	Percent	10.4%	13.9%	17.0%	20.5%
Saint Bernard	Number	37	63	49	20
	Percent	4.5%	7.7%	6.0%	2.6%
Saint Mary	Number	32	16	10	9
	Percent	3.9%	1.9%	1.2%	1.1%
Saint Tammany	Number	22	19	16	9
	Percent	2.7%	2.3%	2.0%	1.1%
Terrebonne	Number	243	208	178	157
	Percent	29.9%	25.3%	21.8%	20.0%
Vermilion	Number	20	20	22	35
	Percent	2.5%	2.4%	2.7%	4.5%
Other Parishes	Number	89	72	54	14
	Percent	10.9%	8.7%	6.6%	1.8%
Mississippi	Number	8	22	21	20
	Percent	1.0%	2.7%	2.6%	2.6%
Texas	Number	3	9	10	11
	Percent	0.4%	1.1%	1.2%	1.4%
Other States	Number	10	7	8	14
	Percent	1.2%	0.9%	1.0%	1.8%
Unknown	Number	16	7	4	3
	Percent	2.0%	0.9%	0.5%	0.4%

Table 23. Parish or State of Residence for Commercial Fishers in Each Volume Category in 2017

		Small	Lower Middle	Upper Middle	Large
Calcasieu	Number	16	15	16	5
	Percent	2.3%	2.3%	2.2%	0.7%
Cameron	Number	14	18	20	9
	Percent	2.0%	2.7%	2.7%	1.2%
Iberia	Number	10	10	6	5
	Percent	1.5%	1.5%	0.8%	0.7%
Jefferson	Number	70	88	122	173
	Percent	10.2%	13.2%	16.7%	23.5%
Lafourche	Number	68	68	63	65
	Percent	9.9%	10.2%	8.6%	8.8%
Livingston	Number	4	3	4	0
	Percent	0.6%	0.5%	0.5%	0.0%
Orleans	Number	10	13	29	33
	Percent	1.5%	2.0%	4.0%	4.5%
Plaquemines	Number	85	77	125	137
	Percent	12.4%	11.6%	17.1%	18.6%
Saint Bernard	Number	57	48	53	20
	Percent	8.3%	7.2%	7.3%	2.7%
Saint James	Number	3	5	0	0
	Percent	0.4%	0.8%	0.0%	0.0%
Saint Mary	Number	25	18	8	8
	Percent	3.6%	2.7%	1.1%	1.1%
Saint Tammany	Number	26	20	11	12
	Percent	3.8%	3.0%	1.5%	1.6%
Terrebonne	Number	208	188	175	172
	Percent	30.3%	28.2%	23.9%	23.4%
Vermilion	Number	15	19	24	27
	Percent	2.2%	2.9%	3.3%	3.7%
Other Parishes	Number	62	37	37	39
	Percent	9.0%	5.6%	5.1%	5.3%
Mississippi	Number	7	15	18	8
	Percent	1.0%	2.3%	2.5%	1.1%
Other States	Number	7	23	19	22
	Percent	1.0%	3.5%	2.6%	3.0%
Unknown	Number	0	1	1	0
	Percent	0.0%	0.2%	0.1%	0.0%

Table 24. Parish or State of Residence for Commercial Fishers in Each Volume Category in 2018

		Small	Lower Middle	Upper Middle	Large
Calcasieu	Number	21	10	10	10
	Percent	3.6%	1.7%	1.7%	1.7%
Cameron	Number	11	18	20	9
	Percent	1.9%	3.1%	3.4%	1.5%
Jefferson	Number	59	82	102	172
	Percent	10.1%	14.0%	17.4%	29.4%
Lafourche	Number	70	63	64	82
	Percent	11.9%	10.8%	10.9%	14.0%
Orleans	Number	13	11	26	41
	Percent	2.2%	1.9%	4.4%	7.0%
Plaquemines	Number	59	85	87	150
	Percent	10.1%	14.5%	14.8%	25.6%
Saint Bernard	Number	42	46	61	36
	Percent	7.2%	7.8%	10.4%	6.1%
Saint Mary	Number	19	14	11	4
	Percent	3.2%	2.4%	1.9%	0.7%
Saint Tammany	Number	16	15	14	14
	Percent	2.7%	2.6%	2.4%	2.4%
Terrebonne	Number	176	184	140	185
	Percent	30.0%	31.4%	23.9%	31.6%
Vermilion	Number	13	22	20	20
	Percent	2.2%	3.8%	3.4%	3.4%
Other Parishes	Number	66	45	46	40
	Percent	11.3%	7.7%	7.8%	6.8%
Florida	Number	0	3	3	4
	Percent	0.0%	0.5%	0.5%	0.7%
Mississippi	Number	11	16	19	12
	Percent	1.9%	2.7%	3.2%	2.0%
Other States	Number	4	12	22	14
	Percent	0.7%	2.0%	3.8%	2.4%
Unknown	Number	6	2	4	0
	Percent	1.0%	0.3%	0.7%	0.0%

**Other Seafood Landed by Commercial Shrimp Harvesters:
Volume and Dockside Value of All Seafood Landed in Louisiana by
Commercial Shrimp Harvesters**

Dockside Value of All Seafood Landed by Shrimp-Harvesting Commercial Fishers

The waters of Louisiana, a productive and diverse fishery resource, offer commercial shrimpers the opportunity to harvest many types of seafood other than shrimp. To examine the extent to which shrimpers participate in other fisheries, this section examines the dockside value of all seafood landed by those commercial fishers who were previously identified as having harvested and landed shrimp commercially.

The total real dockside value of all seafood landed in Louisiana by the 2,656 commercial fishers who landed shrimp in 2018 was \$128.8 million (Table 25). The dockside value of shrimp (\$108.8 million) (Table 3) was thus equal to 84.4 percent of the value of all seafood shrimpers harvested that year. The ratio of shrimp value to total seafood value in 2018 was comparable to the ratios for 2013 (0.859), 2014 (0.858), and 2016 (0.845).

The average real dockside value of all seafood landed among individual shrimpers in 2018 (Table 26) was \$48,486 (when the average real dockside value of shrimp was \$40,905) The average real dockside value of shrimpers' total seafood landings in previous years ranged from about \$35 thousand in 2002 and 2003 to \$72 thousand in 2014.

The ratio of the dockside value of shrimp to the dockside value of all seafood landings was computed for each individual commercial shrimper for every year during the study period. Among the 2,656 commercial shrimpers in 2018, the average value for this ratio was 0.882 (Table 27). The averages for this ratio were somewhat higher in previous years, ranging from 0.883 in 2009 to 0.917 in 2006.

Table 25. Nominal and Real Dockside Value of All Commercial Seafood Landings in Louisiana among Commercial Fishers Who Landed Shrimp

Year	Nominal Dockside Value	Real Dockside Value
2000	\$289,240,354	\$370,441,027
2001	\$222,624,121	\$279,012,559
2002	\$159,620,781	\$196,941,124
2003	\$156,592,043	\$189,670,595
2004	\$157,321,563	\$185,564,476
2005	\$145,947,883	\$166,950,221
2006	\$160,817,574	\$178,547,323
2007	\$159,446,534	\$172,393,269
2008	\$156,332,306	\$165,799,454
2009	\$137,452,080	\$144,686,400
2010	\$117,987,951	\$122,763,449
2011	\$149,046,522	\$151,902,285
2012	\$165,926,397	\$165,926,397
2013	\$210,419,776	\$206,780,441
2014	\$276,232,371	\$266,427,827
2015	\$160,264,163	\$152,938,413
2016	\$165,812,402	\$156,515,388
2017	\$152,905,614	\$141,644,848
2018	\$142,160,023	\$128,779,801

Real Value = Constant Inflation-Adjusted 2012 Dollars

Table 26. Average and Median Real Dockside Value of All Seafood Landings among Commercial Fishers Who Landed Shrimp

Year	Average	Median	Standard Deviation	Coeff. of Variation
2000	\$53,804	\$16,252	93,340.0	173.48
2001	\$40,256	\$13,361	70,001.1	173.89
2002	\$35,281	\$11,685	63,038.9	178.67
2003	\$35,639	\$11,097	64,628.3	181.34
2004	\$39,967	\$11,917	74,691.6	186.89
2005	\$43,263	\$14,926	75,090.5	173.57
2006	\$52,222	\$16,478	92,132.5	176.42
2007	\$52,225	\$19,218	87,338.4	167.24
2008	\$57,054	\$20,834	95,987.0	168.24
2009	\$44,287	\$16,469	74,278.2	167.72
2010	\$38,763	\$15,199	66,458.2	171.45
2011	\$41,743	\$14,651	79,438.4	190.30
2012	\$49,873	\$17,519	85,610.1	171.66
2013	\$64,579	\$24,934	157,932.2	244.56
2014	\$72,360	\$28,503	142,300.9	196.66
2015	\$47,262	\$16,042	173,939.7	368.04
2016	\$48,397	\$19,098	78,808.2	162.84
2017	\$50,246	\$17,890	89,355.5	177.83
2018	\$48,486	\$18,413	78,950.2	162.83

Table 27. Average Ratio of Dockside Value of Shrimp to Dockside Value of All Seafood Landings among Commercial Fishers Who Landed Shrimp

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Average	0.900	0.896	0.894	0.889	0.889	0.910	0.917	0.902	0.902	0.883
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	
Average	0.898	0.885	0.888	0.896	0.895	0.876	0.886	0.890	0.882	

The average ratio of the dockside value of shrimp to the dockside value of all seafood may provide a somewhat misleading impression of the share of revenue that most shrimpers derive from shrimp. Though the average ratio for 2018 (0.882) might suggest most shrimpers obtained 88 percent of their total seafood earnings from shrimp and the remaining 12 percent from something else, relatively few shrimpers caught anything other than shrimp. In fact, the ratio of shrimp to all seafood value was equal to 1.00 for 74.0 percent of 2018 shrimpers (Table 28) which means that shrimp was the only type of seafood landed by nearly three quarters of the year’s shrimpers.

For a large majority of shrimpers in every year during the study period, shrimp appears to have been the only form of commercial seafood they landed. In every single year, the ratio of shrimp value to all seafood value was 1.00 for at least 66.8 percent of the year’s shrimpers.

Table 28. Percentage of Commercial Shrimp Harvesters for Whom the Ratio of Dockside Value of Shrimp to the Dockside Value of All Commercial Seafood Was In the Following Ranges

Year	Less than 0.25	0.25 – 0.499	0.50 – 0.749	0.75-0.999	1.00
2000	6.0%	3.5%	4.0%	19.7%	66.8%
2001	6.7%	3.2%	4.1%	18.1%	67.9%
2002	6.6%	3.6%	4.3%	16.1%	69.4%
2003	7.1%	3.8%	3.9%	13.3%	71.9%
2004	6.9%	3.9%	4.1%	16.1%	69.1%
2005	5.3%	3.1%	4.2%	12.5%	74.9%
2006	5.2%	2.5%	3.4%	12.6%	76.3%
2007	6.5%	2.6%	3.8%	15.7%	71.4%
2008	5.9%	3.7%	3.7%	15.4%	71.3%
2009	8.2%	2.9%	4.5%	15.1%	69.2%
2010	5.9%	3.6%	4.3%	12.7%	73.5%
2011	7.4%	3.9%	4.0%	12.1%	72.7%
2012	7.8%	2.9%	3.8%	13.0%	72.6%
2013	6.8%	3.1%	3.5%	14.1%	72.5%
2014	7.1%	2.8%	3.6%	13.6%	72.8%
2015	9.2%	3.3%	3.3%	10.5%	73.6%
2016	7.3%	3.7%	4.5%	11.4%	73.2%
2017	7.7%	3.0%	3.6%	11.5%	74.1%
2018	8.1%	3.7%	3.5%	10.8%	74.0%

Dockside Value of All Seafood Landed by Shrimp-Harvesting Commercial Fisher in Different Shrimp Volume Categories

This section examines the dockside value of total seafood landings harvested by shrimpers within the previously defined shrimp volume categories². Shrimp represented the majority of total seafood landings for shrimpers in each volume category.

Total Seafood Harvested by Commercial Fishers in the Small Volume Category

The average value of all seafood harvested by shrimpers in the small volume category in 2018 was \$8,492 (Table 29). The average total seafood values in this category varied widely throughout the period, ranging in previous years from about \$3,700 in 2006 to \$23,000 in 2015.

Median values were typically much smaller than their corresponding averaged and arguably serve as a better measure of central tendency than the average for this variable. The median value of seafood landed by shrimpers in the small volume category was \$589 in 2018 (Table 30) and previously fluctuated between \$531 and \$1,189.

² Small Volume Category = Commercial fishers with less than 1,800 pounds of shrimp landings
 Lower Middle Volume Category = Commercial fishers with 1,800 to 10,499 pounds of shrimp landings
 Upper Middle Volume Category = Commercial fishers with 10,500 to 40,000 pounds of shrimp landings
 Large Volume Category = Commercial fishers with more than 40,000 pounds of shrimp landings

Table 29. Average Real Dockside Value of All Seafood Landed by Commercial Fishers in Each Shrimp Volume Category: 2000 - 2018

Year	Small	Lower Middle	Upper Middle	Large
2000	\$6,280	\$14,362	\$51,902	\$191,115
2001	\$4,596	\$14,424	\$44,919	\$152,581
2002	\$4,300	\$12,039	\$36,339	\$138,257
2003	\$4,176	\$10,726	\$30,831	\$122,997
2004	\$4,990	\$8,892	\$29,343	\$125,746
2005	\$4,267	\$9,987	\$34,609	\$145,354
2006	\$3,684	\$10,051	\$28,039	\$143,934
2007	\$6,242	\$11,020	\$31,920	\$140,864
2008	\$5,502	\$12,361	\$36,667	\$157,245
2009	\$4,843	\$11,884	\$30,234	\$119,608
2010	\$4,126	\$11,272	\$33,981	\$130,828
2011	\$6,680	\$11,349	\$34,357	\$140,972
2012	\$7,517	\$12,437	\$36,878	\$145,577
2013	\$16,752	\$15,909	\$47,796	\$173,455
2014	\$9,097	\$24,222	\$54,763	\$186,623
2015	\$23,226	\$15,418	\$34,399	\$119,110
2016	\$8,258	\$15,160	\$34,994	\$133,815
2017	\$8,966	\$14,510	\$31,813	\$139,546
2018	\$8,492	\$14,321	\$30,850	\$119,531

The average ratio of the dockside value of shrimp to the dockside value of all seafood landed by shrimpers in the small volume category was 0.815 in 2018 (Table 31). The ratio was equal to 1.00 for 77.3 percent of the small volume category shrimpers in 2018 and for at least 75 percent of all small category shrimpers in the previous years in the study period (Table 32).

Total Seafood Harvested by Commercial Fishers in the Lower Middle Volume Category

In 2018, the average value of all seafood harvested by shrimpers in the lower middle volume category was \$14,321 (Table 29). The category averages earlier in the study period varied between about \$9,000 (in 2004 and 2005) and \$24,000 in 2014.

The average for shrimpers in the lower middle volume category in 2018 was about 2.9 times larger than the median (Table 30) for that year (\$4,867). In previous years, the category averages were 1.5 to 2.9 times larger than the corresponding category medians.

The average ratio of the dockside value of shrimp to the dockside value of all seafood landed by shrimpers in the lower middle volume category in 2018 was 0.842 (Table 31). For 73.3 percent of the lower middle volume category shrimpers that year, this ratio was equal to 1.0, indicating that all of their commercial seafood earnings came from shrimp landings (Table 33).

Table 30. Median Real Dockside Value of All Seafood Landed by Commercial Fishers in Each Shrimp Volume Category: 2000 – 2018

Year	Small	Lower Middle	Upper Middle	Large
2000	\$980	\$9,077	\$45,163	\$146,882
2001	\$972	\$8,525	\$38,975	\$120,522
2002	\$714	\$7,246	\$31,731	\$101,395
2003	\$611	\$5,444	\$25,573	\$88,989
2004	\$531	\$4,989	\$23,562	\$87,088
2005	\$705	\$6,309	\$29,520	\$108,108
2006	\$605	\$5,079	\$22,484	\$97,578
2007	\$715	\$5,830	\$26,812	\$99,851
2008	\$818	\$6,302	\$28,781	\$111,277
2009	\$619	\$5,146	\$22,756	\$80,536
2010	\$869	\$7,253	\$28,269	\$101,348
2011	\$709	\$6,186	\$30,264	\$96,593
2012	\$777	\$6,216	\$29,523	\$106,087
2013	\$988	\$8,422	\$39,077	\$125,279
2014	\$1,189	\$9,939	\$44,755	\$143,747
2015	\$620	\$5,208	\$25,881	\$81,987
2016	\$596	\$5,907	\$29,261	\$95,289
2017	\$577	\$4,313	\$25,517	\$88,213
2018	\$589	\$4,867	\$21,517	\$81,947

Table 31. Average Ratio of Shrimp Value to Dockside Value of All Seafood Landings among Commercial Fishers in Each Shrimp Volume Category: 2000 - 2018

Year	Small	Lower Middle	Upper Middle	Large
2000	0.847	0.894	0.919	0.973
2001	0.850	0.878	0.929	0.969
2002	0.854	0.867	0.923	0.975
2003	0.854	0.865	0.893	0.969
2004	0.834	0.878	0.894	0.963
2005	0.866	0.891	0.922	0.973
2006	0.876	0.883	0.923	0.971
2007	0.829	0.881	0.909	0.970
2008	0.845	0.874	0.906	0.970
2009	0.823	0.845	0.892	0.960
2010	0.837	0.872	0.933	0.963
2011	0.817	0.860	0.914	0.970
2012	0.807	0.871	0.908	0.970
2013	0.818	0.864	0.918	0.978
2014	0.829	0.870	0.904	0.968
2015	0.812	0.843	0.880	0.973
2016	0.830	0.852	0.902	0.958
2017	0.830	0.842	0.906	0.975
2018	0.815	0.842	0.889	0.957

Table 32. Percentage of Commercial Fishers in the Small Volume Category Who Landed Shrimp for Whom the Ratio of Dockside Value of Shrimp to the Dockside Value of All Commercial Seafood Was in the Following Ranges

Year	Less than 0.25	0.25 – 0.499	0.50 – 0.749	0.75-0.999	1.00
2000	13.5%	2.5%	1.8%	4.4%	77.8%
2001	13.1%	2.5%	2.0%	4.0%	78.5%
2002	12.8%	2.3%	1.9%	3.5%	79.6%
2003	13.3%	1.9%	1.2%	2.7%	80.8%
2004	15.0%	2.3%	1.9%	2.8%	78.0%
2005	12.7%	0.8%	2.1%	1.9%	82.6%
2006	11.0%	1.9%	1.9%	1.9%	83.2%
2007	16.2%	1.4%	1.4%	3.8%	77.3%
2008	14.6%	1.4%	1.8%	3.0%	79.2%
2009	16.4%	2.2%	1.8%	2.6%	77.0%
2010	14.2%	3.2%	1.8%	4.1%	76.7%
2011	16.4%	2.8%	2.1%	3.0%	75.7%
2012	18.0%	2.2%	1.9%	2.7%	75.2%
2013	16.8%	2.4%	1.5%	2.5%	76.7%
2014	15.6%	2.5%	1.0%	3.0%	77.9%
2015	17.5%	2.3%	1.4%	1.9%	77.0%
2016	15.0%	2.2%	2.8%	2.6%	77.4%
2017	16.0%	1.3%	1.8%	2.3%	78.6%
2018	17.4%	1.5%	1.9%	1.9%	77.3%

Total Seafood Harvested by Commercial Fishers in the Upper Middle Volume Category

In 2018 the average real dockside value of all seafood landed by shrimpers in the upper middle volume category was \$30,805 (Table 29) with a median of \$21,517 (Table 30). In previous years in the study period, the averages ranged between approximately \$28,000 (in 2006) and \$55,000 (in 2014). Category medians ranged between approximately \$22,000 (2006) and \$45,000 (2000 and 2013).

The average ratio of the dockside value of shrimp to the dockside value of all seafood landed by shrimpers in the upper middle volume category was 0.889 in 2018 (Table 31). The ratio was equal to 1.0 for about 71 percent of the shrimpers in this category (Table 34).

Table 33. Percentage of Commercial Fishers in the Lower Middle Volume Category Who Landed Shrimp for Whom the Ratio of Dockside Value of Shrimp to the Dockside Value of All Commercial Seafood Was in the Following Ranges

Year	Less than 0.25	0.25 – 0.499	0.50 – 0.749	0.75-0.999	1.00
2000	5.8%	5.4%	4.1%	13.3%	71.4%
2001	7.9%	5.3%	4.0%	12.4%	70.5%
2002	8.2%	6.1%	4.7%	11.2%	69.8%
2003	8.7%	5.7%	3.7%	9.4%	72.5%
2004	8.1%	5.2%	3.1%	10.6%	73.0%
2005	6.0%	6.2%	3.1%	7.3%	77.4%
2006	8.8%	3.3%	3.5%	7.5%	76.9%
2007	9.1%	3.5%	3.0%	8.9%	75.6%
2008	7.8%	5.7%	4.1%	8.7%	73.7%
2009	12.0%	4.3%	3.5%	9.9%	70.3%
2010	7.7%	5.9%	4.0%	10.4%	71.9%
2011	9.3%	5.3%	4.4%	9.0%	72.0%
2012	10.1%	3.1%	3.8%	8.1%	75.0%
2013	8.9%	5.4%	3.8%	11.1%	70.8%
2014	9.6%	4.2%	3.8%	7.5%	74.9%
2015	12.5%	4.6%	2.8%	7.4%	72.7%
2016	11.0%	4.6%	3.7%	7.9%	72.8%
2017	11.6%	5.3%	3.9%	9.5%	69.8%
2018	13.1%	3.8%	2.2%	7.6%	73.3%

Total Seafood Harvested by Commercial Fishers in the Large Volume Category

The average real dockside value of all seafood landed by shrimpers in the large volume category in 2018 (\$119,531), down from \$139,000 the previous year (Table 29). The average value of all seafood landings among shrimpers in this category was at its highest (\$191,000) at the beginning of the study period when the category dockside value of shrimp was at its highest.

The median value of all seafood landed by shrimpers in the large volume category was \$81,947 (Table 30). Throughout the study period, the category average for this parameter was 26 to 48 percent larger than the corresponding category median.

The average ratio of the dockside value of shrimp to the dockside value of all seafood landed by shrimpers in the large volume category was 0.957 in 2018 (Table 31). The average for this ratio was higher among shrimpers in the large volume category than shrimpers in any other volume category for every year in the study period. The ratio was equal to 1.00 for 75.7 percent of the shrimpers in the large volume category in 2018 (Table 35).

Table 34. Percentage of Commercial Fishers in the Upper Middle Volume Category Who Landed Shrimp for Whom the Ratio of Dockside Value of Shrimp to the Dockside Value of All Commercial Seafood Was in the Following Ranges

Year	Less than 0.25	0.25 – 0.499	0.50 – 0.749	0.75-0.999	1.00
2000	0.8%	5.1%	7.8%	28.1%	58.2%
2001	1.2%	3.5%	7.1%	28.7%	59.5%
2002	1.0%	4.7%	7.4%	26.3%	60.6%
2003	3.5%	6.2%	7.9%	17.9%	64.6%
2004	2.8%	6.9%	7.6%	20.3%	62.4%
2005	1.6%	4.1%	7.9%	16.5%	70.0%
2006	2.8%	4.3%	5.1%	13.0%	74.9%
2007	2.6%	4.8%	7.7%	17.7%	67.3%
2008	2.5%	7.2%	4.8%	18.8%	66.8%
2009	5.3%	4.6%	7.0%	18.6%	64.5%
2010	1.0%	3.6%	6.4%	15.6%	73.5%
2011	1.9%	5.7%	5.9%	17.2%	69.3%
2012	2.9%	5.4%	6.3%	16.4%	69.0%
2013	2.5%	4.3%	5.5%	18.0%	69.7%
2014	3.7%	3.8%	7.3%	19.1%	66.1%
2015	6.2%	5.8%	5.5%	14.9%	67.6%
2016	3.1%	5.9%	6.9%	15.5%	68.7%
2017	4.2%	4.8%	5.3%	14.4%	71.3%
2018	4.3%	7.2%	5.2%	12.3%	70.9%

Conclusion

The trip ticket data examined in this report describe a commercial fishery that has experienced a decline in shrimper participation, activity, and landings. The average number of shrimpers and the average number of shrimping trips in the first four years of the study period were more than twice the averages for the last four years. Harvests, though variable, have followed a generally downward trend, too, though not to the same degree.

Though shrimpers number in the thousands, most of the shrimp landed in Louisiana were harvested by a relatively small minority of commercial fishers. In recent years, shrimpers in the large volume category who may have represented 25 to 30 percent of the shrimper population completed 42 to 50 percent of the shrimping trips and landed 75 to 80 percent of the shrimp.

On the other hand, many of the commercial fishers classified as shrimpers do not appear to be very active in the fishery. Shrimpers in the small volume category, comparable in number to those in the large volume category, landed less than one percent of the shrimp.

Table 35. Percentage of Commercial Fishers in the Large Volume Category Who Landed Shrimp for Whom the Ratio of Dockside Value of Shrimp to the Dockside Value of All Commercial Seafood Was in the Following Ranges

Year	Less than 0.50	0.50 – 0.749	0.75-0.999	1.00
2000	0.4%	2.9%	43.8%	53.0%
2001	0.7%	3.8%	40.9%	54.6%
2002	0.4%	3.4%	34.1%	62.2%
2003	1.3%	3.1%	28.7%	67.0%
2004	1.5%	4.1%	33.7%	60.7%
2005	0.5%	3.6%	27.2%	68.7%
2006	0.9%	3.1%	24.6%	71.5%
2007	1.0%	2.9%	29.0%	67.2%
2008	0.9%	3.7%	28.5%	66.9%
2009	1.1%	5.5%	27.9%	65.5%
2010	0.5%	5.0%	22.8%	71.7%
2011	0.8%	3.6%	21.3%	74.2%
2012	0.9%	3.0%	24.9%	71.2%
2013	0.2%	3.0%	23.7%	73.2%
2014	1.3%	2.8%	23.9%	72.1%
2015	0.5%	3.7%	18.3%	77.5%
2016	2.4%	4.4%	19.4%	72.9%
2017	0.8%	3.3%	19.2%	76.7%
2018	2.5%	4.3%	18.5%	75.7%

Most shrimpers specialized in shrimp. Shrimp was the only type of seafood that appeared in the trip ticket records of more than two-thirds of the shrimpers in the last nine years, regardless of volume category. Future research will explore the specific types of seafood other than shrimp that shrimpers caught in more detail.

This research examined commercial seafood harvesters who landed any species of shrimp in Louisiana that were harvested in all areas and water types. Future research may study shrimpers who landed particular species of fish, such as brown shrimp or white shrimp, or those who harvested in particular areas, such as state waters or Federal waters.

This report offers no explanation, only exposition. The task of finding the source and causes of the observed trends and correlations it defers to future research and to others with an interest in and knowledge of the commercial shrimping fishery.