

# Louisiana Commercial Crawfish Harvesters Survey Report



By

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Louisiana Department of Wildlife and Fisheries  
Socioeconomic Research and Development Section



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# **Louisiana Commercial Wild Crawfish Harvester's Survey Report**



By  
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Louisiana Department of Wildlife and Fisheries  
Socioeconomic Research and Development Section

March, 2010

## **Louisiana Commercial Wild Crawfish Harvester's Survey Report**

### **Introduction**

Louisiana's aquatic and marine resources support the production of millions of pounds of commercial seafood every year. The production of crawfish, though relatively minor in terms of volume relative to shrimp, crabs, and oysters, nevertheless has a special place in Louisiana's culture and economy. Within the Louisiana crawfish industry, those fishermen who harvest and sell crawfish from the wild (wild crawfish harvesters) play a special part, serving a sector of consumers who prefer crawfish obtained from natural or wild origins.

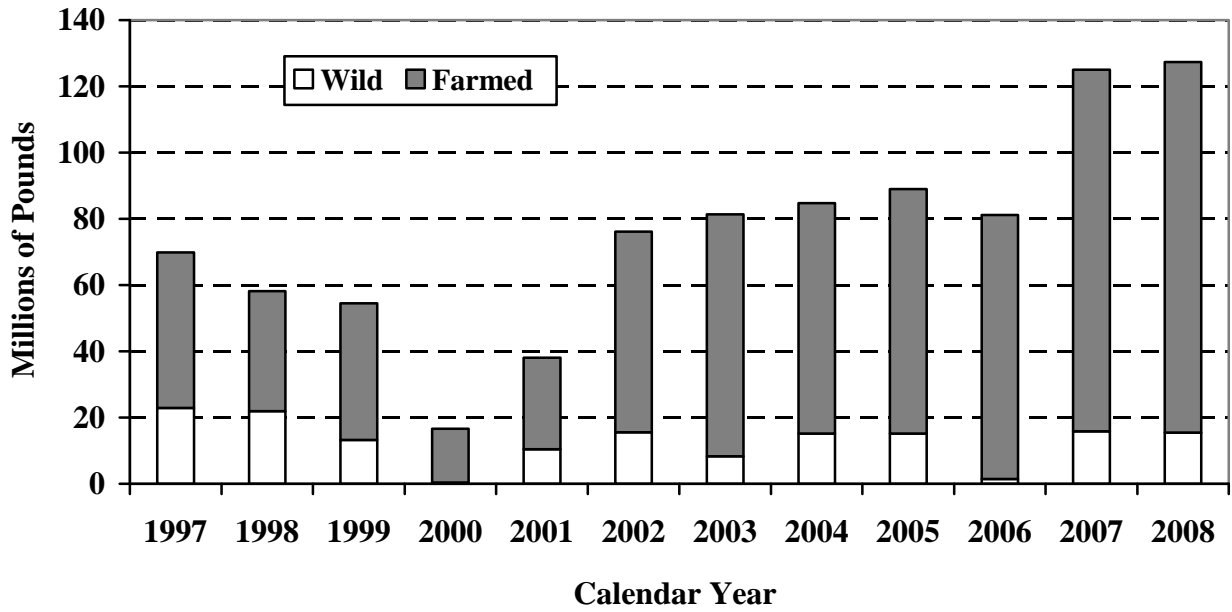
As a regulator and manager of natural resources, the Louisiana Department of Wildlife and Fisheries (LDWF) has the potential to affect wild crawfish harvests and harvesters. In early 2010, the LDWF conducted a survey of resident wild crawfish harvesters to learn more about these individuals and their preferences and perspectives of selected actual and hypothetical regulations and management practices. The results of this survey will inform the LDWF as they assess the Department's rules, procedures, policies, and practices that are most relevant to wild crawfish management.

### **Louisiana Crawfish Production**

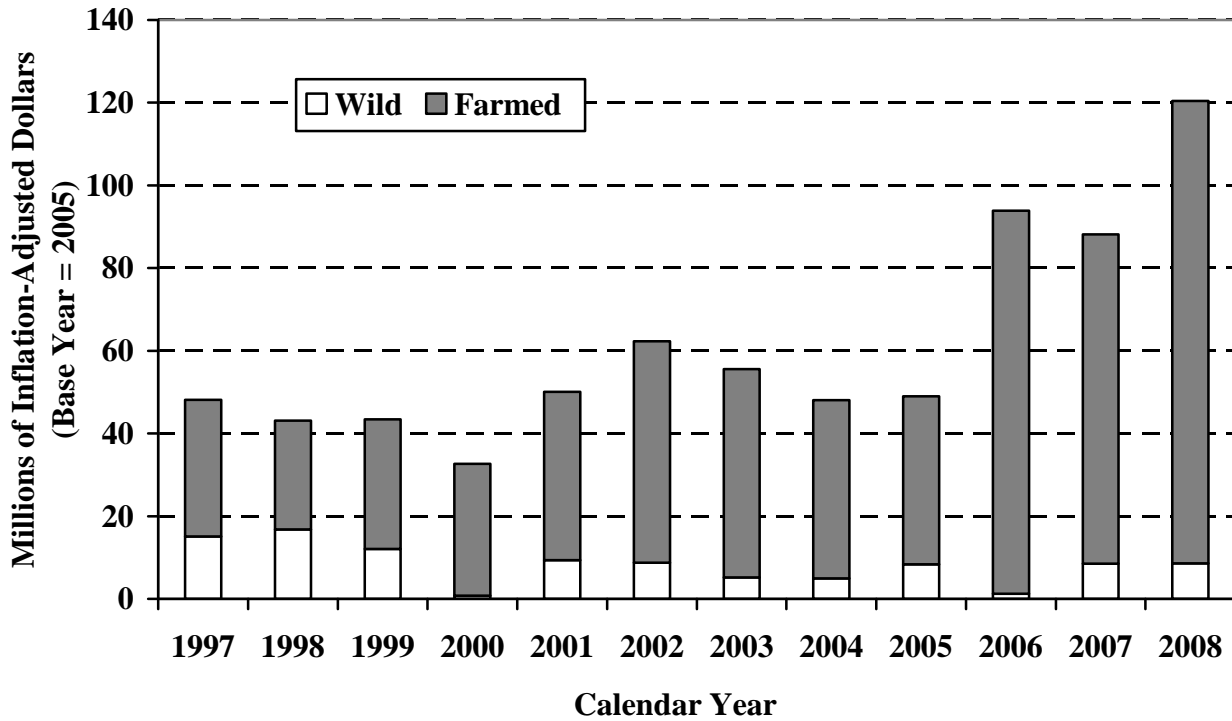
Louisiana's commercial crawfish harvest is derived from two sources: commercial aquaculture operations (crawfish farms or ponds) and commercial harvests of crawfish from the wild. Farmed-raised crawfish has regularly accounted for the vast majority of the volume (Figure 1) and value (Figure 2) of the state's commercial crawfish production. Of the 127.3 million pounds of crawfish produced in Louisiana in calendar year 2008, 111.9 million pounds (87.9%) came from farms and 15.4 million pounds (12.1%) was harvested from the wild.

This report will focus on wild-caught crawfish because the policies, regulations, and research of the LDWF relate more directly to crawfish derived from the wild than from agricultural sources. Farm-raised crawfish, as an agricultural product, falls under the purview of the Louisiana Department of Agriculture and Forestry, the United States Department of Agriculture, and other agencies.

**Figure 1. Volume of Louisiana Wild-Caught Crawfish and Farm-Raised Crawfish: 1997 - 2008**



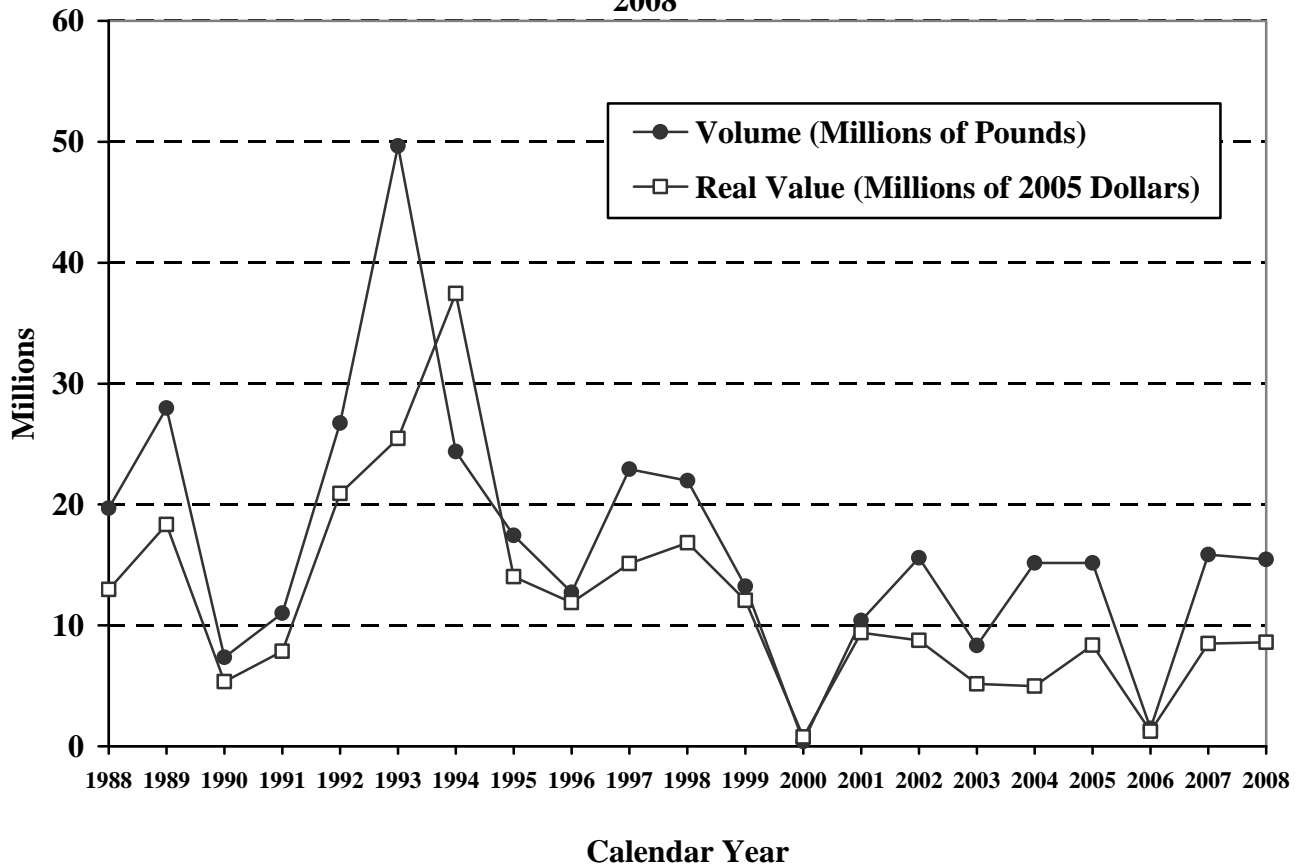
**Figure 2. Value of Louisiana Wild-Caught Crawfish and Farm-Raised Crawfish: 1997 - 2008**





Subject to a variety of biological, environmental, and economic factors, the volume and value of Louisiana’s wild crawfish harvest are highly variable (Figure 3). Since 1988, commercial harvests have averaged 16.8 million pounds per year with a low of 392 thousand pounds in 2000 and a high of 49.7 million pounds in 1993. The dockside value of commercial wild crawfish landings (expressed in constant, inflation adjusted 2005 dollars) have averaged \$12.10 million dollars during that period.

**Figure 3. Volume and Value of Louisiana Wild Crawfish Harvest: 1988 - 2008**



**Louisiana Resident Commercial Wild Crawfish Harvesters**

LDWF Commercial Licenses database and trip ticket files can be used to define and identify commercial wild crawfish harvesters and to discern some basic descriptive facts about crawfish landings and harvesters. In order to harvest wild crawfish legally for commercial purposes (that is, to land and sell crawfish obtained from wild or non-agricultural areas), one must hold two licenses: a commercial

fisherman license (which permits the holder to land crawfish and other seafood species) and a commercial crawfish trap license (which permits the holder to deploy and harvest any number of legal crawfish traps). In license year 2008, the LDWF issued 10,490 resident commercial fisherman licenses<sup>1</sup> and 1,756 commercial crawfish trap licenses.

The LDWF Inland Fisheries Division consulted with staff from the LDWF Socioeconomic Research and Development Section and staff from the LDWF Research and Assessment Division to identify everybody who held a resident commercial fisherman license and reported landings of crawfish on trip tickets between July 1, 2008 and June 30, 2009.

The LDWF does not identify everybody who holds a crawfish trap license as an active commercial wild crawfish harvester. Many individuals may hold a commercial crawfish trap license but not actually deploy crawfish traps, sell crawfish, or otherwise participate in the commercial seafood sector in any given year.

The LDWF prefers to define “active resident wild crawfish harvesters” as those individuals who held a resident commercial fisherman license and completed and submitted trip tickets that indicated the landing and sale of crawfish in Louisiana within the previous license year. Based on trip ticket data from July 1, 2008 to June 30, 2009, one thousand one hundred forty two (1,142) qualified as active resident commercial wild crawfish harvesters under these criteria.

#### *Parish of Residence among Active Resident Wild Crawfish Harvesters*

The parish of residence for the wild crawfish harvesters was determined according to the city included in the Louisiana resident commercial fisherman’s license files (Table 1). Commercial wild crawfish harvesters resided in thirty (30) parishes. Nearly four-fifths (78.2 percent) lived in four parishes within or near the Atchafalaya Basin: Assumption, Iberville, St. Martin, and St. Mary.

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<sup>1</sup> Most of these resident commercial fisherman licenses were not held by individuals who harvested crawfish.

**Table 1. Parish of Residence for Active Resident Wild Crawfish Harvesters, 2009**

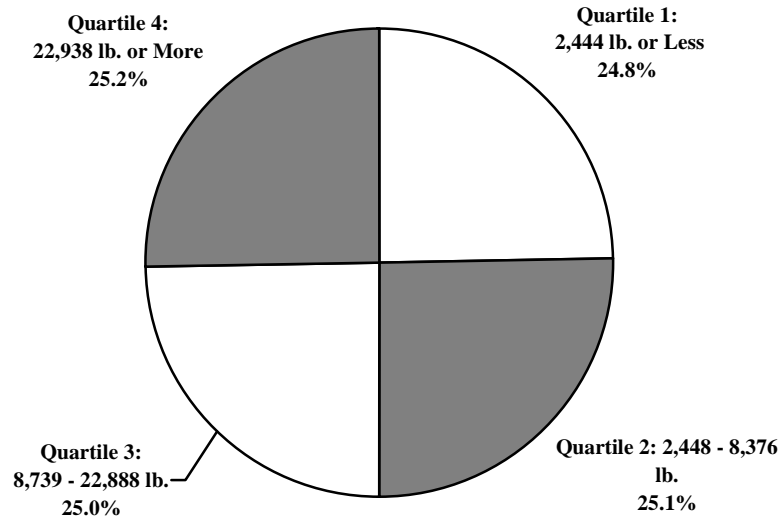
<b>Parish</b>	<b>Number</b>	<b>Percent</b>	<b>Parish</b>	<b>Number</b>	<b>Percent</b>
Acadia	3	0.26%	Rapides	3	0.26%
Ascension	13	1.14%	St. Charles	4	0.35%
Assumption	265	23.20%	St. James	3	0.26%
Avoyelles	58	5.08%	St. Landry	22	1.93%
Calcasieu	3	0.26%	St. Martin	240	21.02%
Cameron	3	0.26%	St. Mary	152	13.31%
East Baton Rouge	9	0.79%	Terrebonne	8	0.70%
Iberia	40	3.50%	West Baton Rouge	9	0.79%
Iberville	236	20.67%	Other North Louisiana <sup>a</sup>	3	0.26%
Lafayette	12	1.05%	Other SW Louisiana <sup>b</sup>	5	0.44%
Lafourche	6	0.53%	Other SE Louisiana <sup>c</sup>	4	0.26%
Livingston	20	1.75%			
Pointe Coupee	21	1.84%	State Total	1,142	
a-Other North Louisiana category includes De Soto, Catahoula, and Concordia Parishes b-Other Southwest Louisiana category includes Evangeline, Vermilion, and Vernon Parishes c-Other Southeast Louisiana category includes East Feliciana, Plaquemines, and Tangipahoa Parishes					

*Commercial Crawfish Harvest Categories: Catch Quartiles*

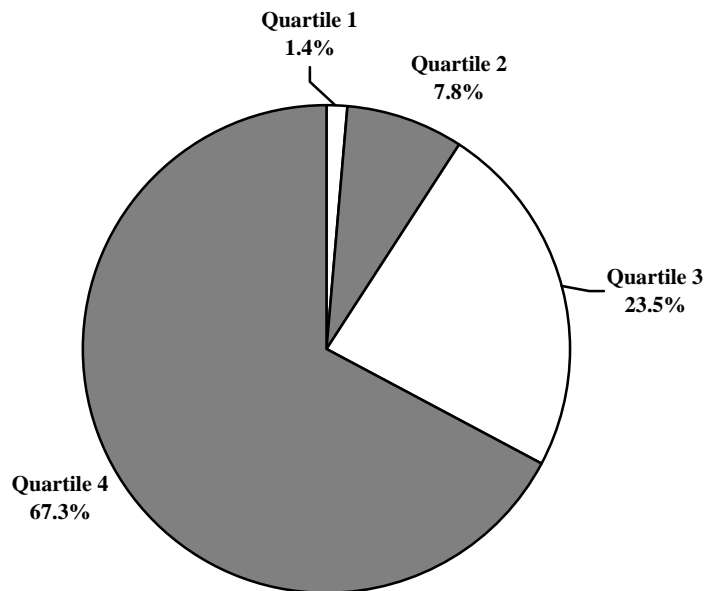
In order to learn more about the distribution of the quantity of commercial crawfish landings among commercial harvesters, the population of active resident wild crawfish harvesters was sorted by the quantity of crawfish landings they reported on their trip tickets between July 1, 2008 and June 30, 2009. The population was then divided into four separate groups (or “catch quartiles”) of roughly equal size. Three of the commercial crawfish catch categories (Quartiles 1 – 3) contained 284 crawfish harvesters each (Figure 4). Quartile 4 was slightly smaller (282 crawfish harvesters) because the survey population was not evenly divisible by four.

Quartile 1 consisted of 284 commercial fishermen who landed less than 2,445 pounds of wild crawfish between July 1, 2008 and June 30, 2009. The average reported crawfish landings by harvesters in this quartile were 907.7 pounds. The collective harvest by crawfish harvesters in this quartile accounted for only 1.4 percent of all of the reported crawfish landings in Louisiana for that period (Figure 5).

**Figure 4. Apportionment of the Population of Active Resident Crawfish Harvesters (July 1, 2008 to July 30, 2009) by Catch Quartiles**



**Figure 5. Percentage of All Commercial Crawfish Landings (July 1, 2008 to June 30, 2009) Reported by Active Resident Crawfish Harvesters in Each Catch Quartile**



Quartile 2 consisted of 284 commercial fishermen who landed between 2,448 and 8,376 pounds of wild crawfish between July 1, 2008 and June 30, 2009. The average reported wild crawfish landings by fishermen in this quartile were 4,942.8 pounds. Their collective harvest accounted for only 7.8 percent of all of the reported wild crawfish landings in Louisiana for that period.

Quartile 3 consisted of 284 commercial fishermen who landed between 8,739 and 22,000 pounds of wild crawfish between July 1, 2008 and June 30, 2009. The average quantity of wild crawfish landed by fishermen in this quartile was 14,830.8 pounds. Their collective harvest totaled less than one-quarter (23.5 percent) of all of the reported wild crawfish landings in Louisiana for that period.

Quartile 4 consisted of 282 commercial fishermen who landed more than 22,000 pounds of wild crawfish between July 1, 2008 and June 30, 2009. The average reported wild crawfish landings by fishermen in this quartile were 42,800.9 pounds. The collective harvest by crawfish harvesters in this quartile exceeded two-thirds (67.3 percent) of all of the reported wild crawfish landings in Louisiana for that period.

The parish of residence for all commercial wild crawfish harvesters within each quartile (Table 2) could be determined by examining the city and town identified for each individual in the LDWF License Database. For each quartile, the majority of commercial wild crawfish harvesters resided in Iberville, Assumption, St. Martin, and St. Mary Parishes. The percentage living in these four parishes ranged from 68.53% for Quartile 1 to 73.78% for Quartile 2 to 81.47% for Quartile 3 to 89.09% for Quartile 4.

There are some interesting variations among quartiles for the percentage of wild crawfish harvesters living in individual parishes, most notably St. Martin and St. Mary Parishes. While 12.49% of the wild crawfish harvesters in Quartile 1 resided in St. Martin Parish, 35.21% of those in Quartile 4 lived in that parish. Nearly one-fifth (19.58%) of the wild crawfish harvesters in Quartile 1 lived in St. Mary Parish, while less than ten percent (7.74%) of the wild crawfish harvesters in Quartile 4 lived in St. Mary Parish.

**Table 2. Distribution of Parish of Residence of Active Resident Crawfish Harvesters, By Catch Quartiles**

Parish	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Assumption	54	18.88%	67	23.43%	75	26.22%	69	24.30%	265	23.20%
Avoyelles	20	6.99%	20	6.99%	12	4.20%	6	2.11%	58	5.08%
Cameron	3	1.05%							3	0.26%
Iberia	15	5.24%	8	2.80%	7	2.45%	10	3.52%	40	3.50%
Iberville	49	17.13%	59	20.63%	66	23.08%	62	21.83%	236	20.67%
Lafayette	6	2.10%	3	1.05%	3	1.05%			12	1.05%
Pointe Coupee	5	1.75%	9	3.15%	7	2.45%			21	1.84%
St. Martin	37	12.94%	47	16.43%	56	19.58%	100	35.21%	240	21.02%
St. Mary	56	19.58%	38	13.29%	36	12.59%	22	7.75%	152	13.31%
West Baton Rouge			6	2.10%			3	1.06%	9	0.79%
All Other <sup>a</sup>	41	14.35%	29	10.15%	24	0.84%	12	0.84%	106	9.31%
Total	286		286		286		284		1142	

a-“All Other” includes those parishes which did not have at least three (3) active resident crawfish harvesters in any individual catch quartile: Acadia, Ascension, Calcasieu, Catahoula, Concordia, De Soto, East Baton Rouge, East Feliciana, Evangeline, Lafourche, Livingston, Plaquemines, Rapides, St. Charles, St. James, St. Landry, Tangipahoa, Terrebonne, Vermilion, and Vernon.

### **The LDWF Louisiana Crawfish Harvesters Survey 2010**

In early 2010, the Louisiana Department of Wildlife and Fisheries (LDWF) conducted a survey of Louisiana resident commercial fishermen who harvested wild crawfish to assess their views, opinions, and perspectives on issues of concern in the commercial wild crawfish industry. The results of this survey will be used by the LDWF Inland Fisheries Division in the development and implementation of resource management and regulatory policies. The survey will also be used to inform Louisiana state legislators, members of commercial fishing organizations, and other interested individuals of the range of opinions and viewpoints held by Louisiana’s commercial wild crawfish harvesters.

Representatives from the LDWF Inland Fisheries Division consulted with staff from the LDWF Socioeconomic Research and Development Section to design and implement a survey of commercial wild crawfish harvesters in late 2009. They discussed methods of identifying the population of active

commercial crawfish harvesters, framing the survey sample, designing the survey instrument (questionnaire), and conducting and implementing the survey.

#### *Population and Survey Sample*

An active resident commercial crawfish harvester is defined in this study as any individual who held a resident commercial fisherman license and reported crawfish landings on trip tickets between July 1, 2008 and June 30, 2009. As previously noted, this population included 1,142 individuals.

The LDWF Inland Fisheries Division and Socioeconomic Research and Development section chose to include all 1,142 active resident commercial crawfish harvesters in its survey because sending a survey to all (a) was not prohibitively expensive and (b) would give all active wild crawfish harvesters the opportunity to express their opinions on matters of interest.

#### *Selected Survey Topics*

Of the many issues relevant to commercial crawfish harvesting, the LDWF Inland Fisheries Division selected four with which it had the greatest concern and for which it had the capacity and authority to address. The four issues selected for inclusion in this survey were all hypothetical insofar as the LDWF does not necessarily have plans to alter these specific regulations or management policies at this time.

#### Commercial Crawfish Harvest Seasons

Currently the State of Louisiana does not have a defined crawfish season. Legally licensed commercial fishermen can harvest crawfish using legally acceptable means throughout the year. There are some who believe that a crawfish season may reduce harvest effort at times of the year when many crawfish are small or bearing eggs. If so, proponents of this view believe, a properly-timed commercial wild crawfish season could reduce the amount of harvest activities at these times of the year and result in more and larger crawfish.

### Minimum Crawfish Trap Mesh Size

Currently legal commercial wild crawfish traps must have a minimum mesh size of ¾-inches by 11/16 inches. There are some who propose the establishment of a larger minimum mesh size of ¾-inches by ¾-inches. Proponents of this regulatory change believe that it would result in an increased proportion of landings of larger and potentially more valuable crawfish.

### Area Designation for the Atchafalaya Basin on Trip Ticket Reporting

Louisiana commercial fishermen have been required to provide information for a “trip ticket” whenever they sell their wild commercial seafood harvests to dealers, processors, retailers, or other buyers. Trip tickets include details of the volume (in pounds), value (in dollars), and form of each species landed as well as the area in which most of the related harvest effort was expended. Seafood harvest areas are delineated on a map made available by the LDWF and assigned numbers or codes. Currently virtually all of the Atchafalaya Basin falls within one trip ticket reporting area (Area 0105). Most (74.11 percent) of the commercial landings of wild crawfish landings in the state of Louisiana originate from this single region. There are some who believe that redefining this single area into multiple reporting areas would improve the quality of harvest information and enhance the ability to form resource management decisions. Suggested alternative designations range from as few as two areas (one east of the Atchafalaya, one west of the Atchafalaya River) to as many as thirteen areas (following the boundaries of the U.S. Army Corps of Engineers Water Management Units) within the Atchafalaya Basin.

### Commercial Wild Crawfish Trap Tag Requirements

Currently Louisiana wild crawfish harvesters are not required to affix tags identifying ownership on their crawfish traps. There are some who propose the mandatory placement of tags identifying the owner of all commercial crawfish traps, similar to the requirement placed on commercial crab traps in Louisiana. Proponents of this view believe that tags may assist law enforcement agents in identifying suspects who may be allegedly stealing traps or illegally harvesting wild crawfish from traps that they do not own. Tags may also assist in finding the owners of lost, stolen, or abandoned traps.



Each of these proposals, of course, may also be criticized or opposed for a variety of reasons, such as costs, inconvenience, regulatory burden, and perceived ineffectiveness or inefficiency. Thus, the LDWF Inland Fisheries Division implemented a survey to assess the degree of support for or opposition to these proposals among this important group of stakeholders.

#### *Survey Questionnaire*

Staff from the LDWF Inland Fisheries Division and Socioeconomic Research and Development Section developed a ten-question, three-page questionnaire, *The 2010 Louisiana Crawfisherman Survey*. Four questions that formed the central part of the survey pertained to the proposed alterations to commercial crawfish harvest seasons, trap mesh size, Atchafalaya Basin trip ticket designations, and trap tag requirements.

Another four questions pertained to geographic characteristics or harvesting or marketing practices of the survey respondents. One of these questions asked the respondent to identify where he or she harvested most of his or her crawfish in 2009: east of the river in the Atchafalaya Basin; west of the river in the Atchafalaya Basin; or elsewhere. The second question in this series asked the respondent to identify the parish where he or she sold most of his or her crawfish in 2009. A third question asked the respondent to provide his or her ZIP code and the fourth to estimate how long he or she has been a commercial wild crawfish harvester.

The last page of the questionnaire contained two open-ended questions. One question asked the respondents to identify the major problems they think are affecting the Louisiana wild crawfish industry. The other gave the respondents the opportunity to provide comments or suggestions.

The LDWF designed slightly different questionnaire covers for each quartile that allowed analysts to identify from which commercial harvest category each returned questionnaire came. This is a common practice among survey designers that allows them to incorporate available data more efficiently while still maintaining respondents' anonymity.

### *Survey Implementation*

Staff from the LDWF Inland Fisheries Division and Socioeconomic Research and Development Section prepared survey packages, containing a questionnaire, explanatory letter, and a self-addressed, postage-paid envelope, on January 13, 2010. Survey packages were mailed on January 14, 2010 to 1,142 resident wild crawfish harvesters at the mailing addresses included in the LDWF Commercial License database. Thirteen survey packages were returned as undeliverable and removed from the sample to produce an adjusted sample of 1,129. As of February 23, 2010, 470 completed questions were returned, yielding a response rate of 41.63 percent.

### **Respondents' Parishes of Residence**

The parishes of residence for wild crawfish harvesters were identified by the survey respondents' ZIP codes. The residential pattern among survey respondents (Table 3) was similar to that seen in the license file database. Approximately 80.21 percent resided in Assumption, Iberville, St. Mary, and St. Martin Parishes.

Staff in the Inland Fisheries Division examined every respondent's ZIP codes and parish to determine whether his or her place of residence was east or west of the Atchafalaya River (Figure 6). A majority of respondents (58.3 percent) lived in a city, town, or community on the east side of the Atchafalaya River and approximately one-third (35.5 percent) lived on the west side of the river. Less than five percent (4.3 percent) lived in an area north of the river.

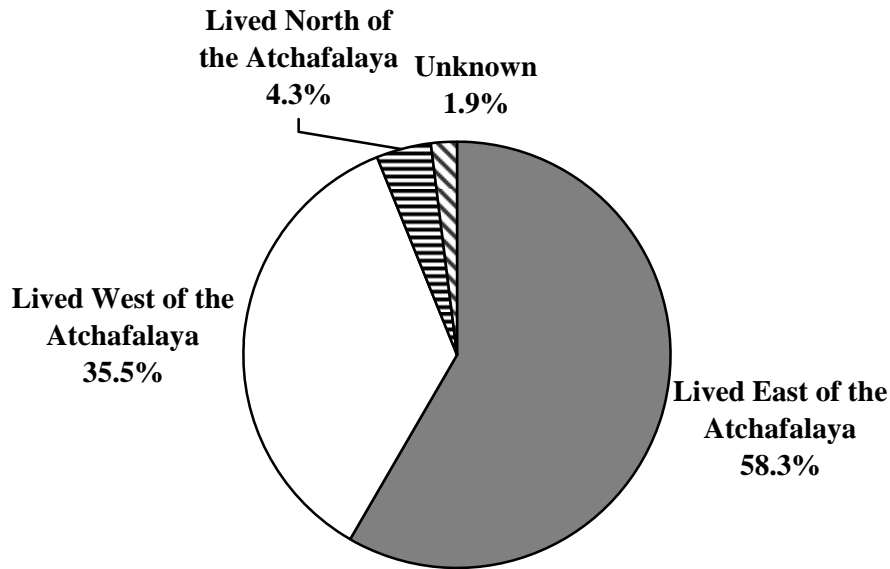
### **Number of Years of Commercial Crawfish Harvesting Activity**

The typical survey respondent has been harvesting crawfish commercially for approximately two decades. The average respondent has been a commercial wild crawfish harvester for 22.02 years (Table 4). The median value was 20 years.

**Table 3. Parish of Residence for Respondents to *The 2010 Louisiana Crawfisherman Survey***

<b>Parish of Residence</b>	<b>Number</b>	<b>Percent</b>	<b>Parish of Residence</b>	<b>Number</b>	<b>Percent</b>
Acadia	1	0.21	Livingston	6	1.28
Ascension	9	1.91	Pointe Coupee	7	1.70
Assumption	104	22.13	Rapides	1	0.21
Avoyelles	19	4.04	St. Charles	2	0.43
Calcasieu	1	0.21	St. Landry	3	0.64
East Baton Rouge	3	0.64	St. Martin	122	25.96
East Feliciana	1	0.21	St. Mary	59	12.55
Evangeline	1	0.21	Tangipahoa	1	0.21
Iberia	19	4.04	Terrebonne	3	0.64
Iberville	92	19.57	West Baton Rouge	2	0.43
Lafayette	3	0.64	Unknown or Invalid	9	1.91
Lafourche	2	0.43	State Total	470	

**Figure 6. Respondents' Place of Residence in Reference to the Atchafalaya River**



**Table 4. Distribution of Years as a Crawfish Harvester among Respondents to *The 2010 Louisiana Commercial Crawfisherman Survey***

<b>Observations</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Median</b>	<b>Mode</b>	<b>Standard Deviation</b>
462	1	74	22.02	20	20	17.78

There was no statistical difference in the number of years of commercial crawfish harvesting reported by respondents on the east side and the west side of the river (Table 5). (Respondents on the north of the river were not included in statistical comparisons because of the small subsample size.)

**Parishes Where Respondents Sold Most of Their Crawfish Landings in 2009**

Like the crawfish harvesters themselves, the majority of the seafood dealers to whom commercial wild crawfish harvesters sold most of their catch in 2009 were also situated near or within the Atchafalaya Basin (Table 6). Among those respondents who identified a single Louisiana parish for the location of their most frequented dealer, nearly nine-tenths (89.1 percent) sold most of their crawfish to dealers in St. Martin, Assumption, Iberville, and St. Mary Parishes.

**Area Where Respondents Reported Landing Most of Their Crawfish in 2009**

Over ninety-percent (91.6 percent) of respondents reported harvesting most of their wild crawfish (Figure 7) within in the Atchafalaya Basin (Basin) in 2009: 56.7 percent on the east side of the Atchafalaya River (river); 29.5 percent on the west side of the river; and 5.6 percent both east and west of the river<sup>2</sup>. Approximately 8.2 percent reported harvesting most of their 2009 crawfish in some location “other” than the Basin. Their responses are presented in Box 1 as the respondents wrote them. The repetition of a site or location in this list is an indication that more than one person identified that locale as the place where they harvested most of their crawfish.

**Table 5. Distribution of Years as a Crawfish Harvester among Respondents , By Place of Residence in Reference to the Atchafalaya River**

	<b>Usable Observations</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Median</b>	<b>Mode</b>	<b>Standard Deviation</b>
East of the River	270	1	74	21.30	20	20	14.68
West of the River	166	1	65	23.65	23.5	20	15.19
North of the River	20	1	50	19.25	20	30	12.96

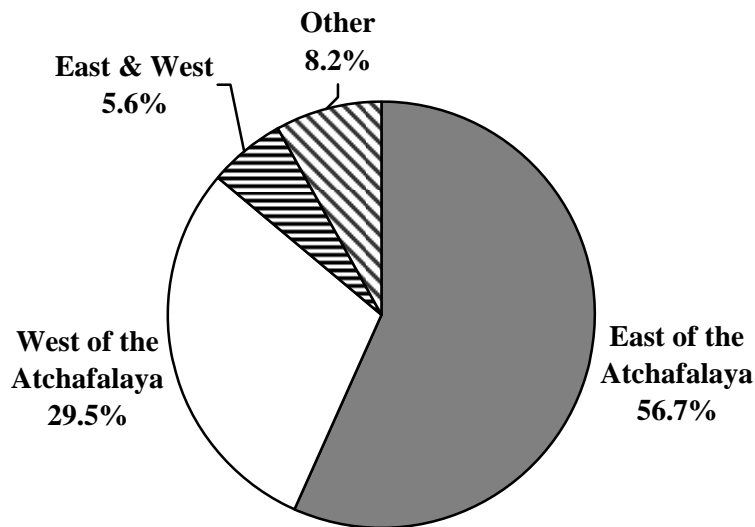
<sup>2</sup> Though the questionnaire did not include an “east and west” alternative, the researcher created a special code when entering the data for those respondents who indicated “east and west”, “both sides” or similar responses.

**Table 6. Location of Crawfish Dealers to Whom Respondents Sold Most of Their Crawfish in 2009, By Parish**

<b>Parish</b>	<b>Number</b>	<b>Percent</b>	<b>Parish</b>	<b>Number</b>	<b>Percent</b>
Ascension	2	0.43%	Plaquemine	1	0.43%
Assumption	109	23.19%	Pointe Coupee	11	2.34%
Avoyelles	15	3.19%	St. Landry	1	0.43%
Caddo	1	0.21%	St. Martin	141	30.0%
East Baton Rouge	1	0.21%	St. Mary	41	8.72%
Iberia	12	2.55%	Terrebonne	1	0.21%
Iberville	110	23.4%	Vermilion	1	0.21%
Lafayette	1	0.21%	Multiple Parishes*	6	1.28%
Lafourche	1	0.21%	Out of State**	2	0.43%
Livingston	1	0.21%	None Identified	12	2.55%

\*\*Multiple Parishes – Assumption & East Baton Rouge; Assumption & Iberville; Assumption & St. Mary; St. Martin & Iberia; St. Martin & St. Mary  
 \*\* Out of State – Texas; Texas to Florida

**Figure 7. Area Where Respondents Reported Landing Most of Their Crawfish Harvests in 2009**



**Box 1. Respondents' Specifications of "Other" Areas Where They Harvested Most of Their Crawfish in 2009**

- North
- Area 0101 (North side)
- Avoyelles/Concordia
- Cat Island area
- Leased property Pierre Part area
- Stephenville: Flat Lake area and Bayou Soleil
- Swamp (Assumption Parish)
- Assumption Parish Swamp
- Grand Lake
- LWAF [Louisiana Wildlife and Fisheries?]
- Flooded woods off Mississippi
- Mississippi
- Mississippi River
- Mississippi River - Old River lease
- Mississippi River - Raccourci Island
- Mississippi River (Vidalia)
- Mississippi River backwater
- Mississippi River north of EBR
- West of Mississippi Wildlife & Fisheries
- Pointe Coupee
- Pointe Coupee
- Port Allen
- Private land
- Raccourci Island
- Raccourci Island
- Raccourci Island
- South of I-10
- Concordia Parish - Three Rivers game preserve
- Three Rivers
- Three Rivers
- Three Rivers LDWF (Rev)
- Wherever
- All over
- Everywhere
- [Nothing specified]
- Became disabled in 2009
- Cash
- Didn't fish in 2009

Respondents who reported landing most of their wild crawfish within the Atchafalaya Basin were similar to each other (and the sample overall) in terms of place of residence (Table 7) and the location of their most-frequented crawfish dealers (Table 9). Assumption, Iberville, St. Martin, St. Mary were the parishes of residence for 83.27 percent of the respondents who landed most of their crawfish in the east side of the river, 84.67 percent of those who landed most of their crawfish on the west side of the river, and 88.0 percent of those who reported landing most of their crawfish on both sides of the river<sup>3</sup>. Similarly, these same four parishes contained the crawfish dealers most frequented by 91.23 percent of the respondents who harvested most of their crawfish on the east side of the river, 88.33 percent of those who harvested most of their crawfish on the west side of the river, and 92.00 percent of those who landed most of their crawfish on both sides of the river.

Respondents who reported harvesting most of their crawfish in some “other” area outside the Atchafalaya Basin<sup>4</sup> appear to demonstrate some differences in the patterns of parish of residence and parish of their most frequented crawfish dealers. While over 80 percent of the respondents who landed most of their crawfish in the Atchafalaya Basin live or sell their crawfish within Assumption, Iberville, St. Martin, and St. Mary Parishes, of those who harvest most of their crawfish in some “other” area, only 41.02 percent live in and only 33.3 percent sell most of their crawfish within those four parishes. Avoyelles Parish stands out among this subsample of respondents as the parish of residence (35.90 percent) and the parish of their most frequented crawfish dealers (28.21 percent).

There is evidence of differences in the length of time that commercial crawfish harvesters have been harvesting crawfish commercially based on the areas where they harvested most of their crawfish (Table 8). The average number of years of commercial crawfishing reported by respondents who

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<sup>3</sup> The interpretation of the results for respondents who reported landing most of their crawfish on both sides of the river must be interpreted with caution because the size of this subsample (25) is too small for statistical reliability.

<sup>4</sup> The interpretation of the results for respondents who reported landing most of their crawfish in some “other” area outside the Basin must be interpreted with caution because the size of this subsample (39) is probably too small for statistical reliability.

harvested most of their crawfish on the west side of the Atchafalaya River (25.07 years) is significantly larger than the average reported by those who harvested most of their crawfish on the east side of the river (21.08 years). The average number of years of commercial crawfishing by those who harvest most of their crawfish in some “other” area outside the Atchafalaya Basin (16.34 years) also appears to be significantly less than the averages reported by those who harvest most of their crawfish within the Basin on the east side, west side, or both sides of the river. (The relatively small size of the “other area” subsample may affect the reliability of these statistical tests, however.)

**Table 7. Respondents’ Parish of Residence, By Primary Crawfish Harvest Area**

Parish of Residence	Respondents Who Harvested Most of Their Crawfish ...							
	East of the River		West of the River		East and West of the River*		Other Area**	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Acadia	1	0.38%						
Ascension	7	2.66%	1	0.74%	1	3.85%		
Assumption	62	23.57%	29	21.32%	5	19.23%	6	15.79%
Avoyelles	2	0.76%	3	2.21%			14	36.84%
Calcasieu	1	0.38%						
East Baton Rouge	1	0.38%	1	0.74%			1	2.63%
East Feliciana							1	2.63%
Evangeline			1	0.74%				
Iberia	8	3.04%	8	5.88%	3	11.54%		
Iberville	71	27.00%	17	12.50%	1	3.85%	2	5.26%
Lafayette	2	0.76%	1	0.74%				
Lafourche	2	0.76%						
Livingston	4	1.52%	2	1.47%				
Pointe Coupee	3	1.14%	1	0.74%			3	7.89%
Rapides							1	2.63%
St. Charles	2	0.76%						
St. Landry	3	1.14%						
St. Martin	47	17.87%	58	42.65%	11	42.31%	5	13.16%
St. Mary	39	14.83%	12	8.82%	5	19.23%	2	5.26%
Tangipahoa							1	2.63%
Terrebonne	1	0.38%	1	0.74%			1	2.63%
West Baton Rouge	2	0.76%						
Unknown or Invalid	5	1.90%	1	0.74%			1	2.63%
<b>Total</b>	<b>263</b>		<b>136</b>		<b>26</b>		<b>38</b>	
*The size of the subsample of respondents who harvest crawfish both east & west of the river is too small for reliable statistical analysis.								
**The size of the subsample who harvest crawfish in other areas is probably too small for reliable statistics analysis.								



**Table 8. Distribution of Years as a Crawfish Harvester among Respondents , By Primary Crawfish Harvest Area**

	<b>Usable Observations</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Median</b>	<b>Mode</b>	<b>Standard Deviation</b>
East of the River	260	1	74	21.08	20	20	14.47
West of the River	135	1	65	25.07	25	30	15.34
East and West of the River	24	3	60	26.63	25	20	13.63
Other Area	38	1	50	16.34	15	20	13.34

**Table 9. Parish of Crawfish Dealers to Whom Respondents Sold Most of Their Crawfish, By Primary Crawfish Harvest Area**

<b>Dealers' Parish</b>	<b>Primary Commercial Crawfish Harvest Area</b>							
	<b>East of the River</b>		<b>West of the River</b>		<b>East and West of the River*</b>		<b>Other Area**</b>	
	<b>No.</b>	<b>Percent</b>	<b>No.</b>	<b>Percent</b>	<b>No.</b>	<b>Percent</b>	<b>No.</b>	<b>Percent</b>
Ascension	1	0.38%	1	0.73%				
Assumption	70	26.62%	27	19.71%	6	23.08%	5	13.16%
Avoyelles	2	0.76%	2	1.46%			11	28.95%
Caddo			1	0.73%				
East Baton Rouge							1	2.63%
Iberia	4	1.52%	7	5.11%	1	3.85%		
Iberville	86	32.70%	20	14.60%	1	3.85%	2	5.26%
Lafayette	1	0.38%						
Lafourche	1	0.38%						
Livingston			1	0.73%				
Plaquemine	1	0.38%						
Pointe Coupee	2	0.76%	1	0.73%			8	21.05%
St. Landry	1	0.38%						
St. Martin	60	22.81%	64	46.72%	12	46.15%	4	10.53%
St. Mary	24	9.13%	10	7.30%	5	19.23%	1	2.63%
Terrebonne	1	0.38%						
Vermilion	1	0.38%						
Multiple Parishes	4 <sup>a</sup>	1.52%	1 <sup>b</sup>	0.73%	1 <sup>c</sup>	3.85%		
Out of State							1 <sup>d</sup>	2.63%
None Identified	4	1.52%	2	1.46%			5	13.16%
<b>Total</b>	<b>263</b>		<b>137</b>		<b>26</b>		<b>38</b>	

a- Parishes: Assumption & East Baton Rouge; Assumption & Iberville; St. Martin & St. Mary

b- Parishes: Iberia & St. Martin

c- Parishes: Assumption & St. Mary

d- State: Texas to Florida

\*The size of the subsample of respondents who harvest crawfish both east & west of the river is too small for reliable statistical analysis.

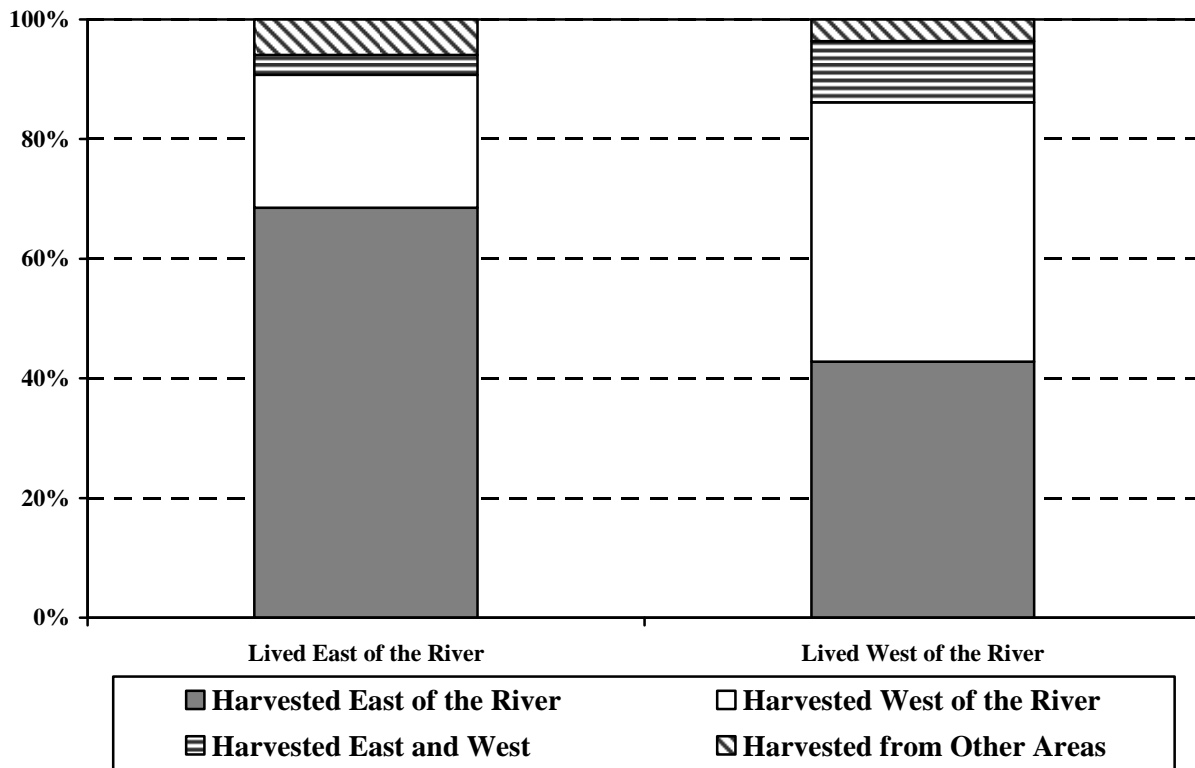
\*\*The size of the subsample who harvest crawfish in other areas is probably too small for reliable statistics analysis.

**Primary Crawfish Harvest Areas According to Place of Residence in Reference to the Atchafalaya River**

Over two-thirds (68.5 percent) of the respondents who resided in a town, city, or community on the east side of the Atchafalaya River harvested the majority of their crawfish on the east side of the river in the Atchafalaya Basin (Figure 8). Approximately one-third (32.4 percent) harvested most of their crawfish on the west side of the river.

Respondents who resided on the west side of the Atchafalaya River were somewhat more likely to “cross over” to the other side of the river when harvesting crawfish. Of the respondents who lived on the west side of the river, 43.4 percent harvested most of their crawfish on the west side of the Basin and 42.8 percent harvested most of their crawfish in the Atchafalaya River on the east side of the Basin. One-tenth (10.2 percent) said they harvested more of their crawfish on both sides of the river.

**Figure 8. Respondents' Primary Crawfish Harvest Areas, By Place of Residence in Reference to the Atchafalaya River**



## Crawfish Catch Quartiles

The original numbers of crawfish harvesters in the catch quartiles were 284 each for Quartiles 1, Quartile 2, and Quartile 3 and 282 for Quartile 4. Following standard procedure, surveys that were returned to the LDWF as undeliverable by the U.S. Postal Service were removed from the subsample population to calculate adjusted subsample sizes. Of the thirteen questionnaires returned to the LDWF as undeliverable, six were from Quartile 1, three from Quartile 2, and four from Quartile 3. Non-deliverable surveys were subtracted from the original category population to produce adjusted category population sizes of 280 for Quartile 1; 283 for Quartile 2; 282 for Quartile 3; and 283 from Quartile 4 (Table 10).

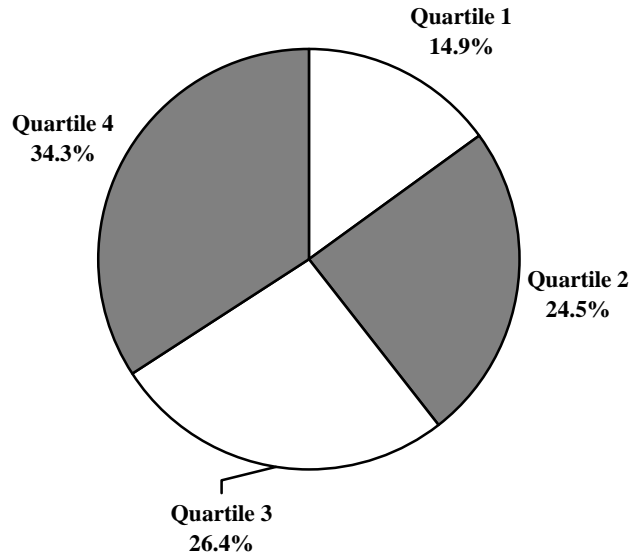
Of the 470 returned questionnaires, 70 were from Quartile 1; 115 from Quartile 2; 124 from Quartile 3; and 161 from Quartile 4. Response rates (the number of returned questionnaires divided by adjusted sample size) were 25.0 percent for Quartile 1; 40.64 percent for Quartile 2; 43.97 percent for Quartile 3; and, 56.69 percent for Quartile 4.

Because response rates varied among the commercial crawfish catch categories (quartiles), some quartiles may make a disproportionately small or large percentage of the survey sample relative to the population of active resident commercial wild crawfish harvesters. Though each quartile contained roughly 25% of all commercial wild crawfish harvesters, only 14.9 percent of the returned questionnaires were from Quartile 1 while 34.3 percent were from Quartile 4 (Figure 9). The percentage of the survey sample from Quartile 2 (24.5 percent) and Quartile 3 (26.4 percent) were roughly equal to the percentage of population within those quartiles.

**Table 10. Survey Subsample Population Sizes, By Catch Quartiles**

<b>Catch Quartile</b>	<b>Population</b>	<b>Non-deliverable*</b>	<b>Adjusted Population</b>
Quartile 1	286	6	280
Quartile 2	286	3	283
Quartile 3	286	4	282
Quartile 4	284	0	284
Total	1,142	13	1,129

**Figure 9. Percentage of Survey Respondents, By Catch Quartiles**



Approximately three-quarters of the respondents in Quartile 1 (72.86 percent), Quartile 2 (75.64 percent), and Quartile 3 (76.61 percent) reside in Assumption, Iberville, St. Martin, and St. Mary (Table 11). A larger percentage of the respondents in Quartile 4 (89.43 percent) live in those four parishes.

The average length of time for which respondents have been harvesting crawfish commercially (Table 12) ranges from a low of 17.37 years in Quartile 1 to a high of 24.53 years in Quartile 4. The average for Quartile 1 is significantly lower than the averages for Quartile 3 (23.43 years) and Quartile 4. The average for Quartile 2 (19.89 years) is also significantly lower than the average for Quartile 4.

There are also apparent differences in the patterns of where respondents within the different quartiles market their crawfish as determined by the location (parish) of the dealer to whom they sell most of their crawfish (Table 13). For instance, while 68.58 percent of the respondents in Quartile 1 sell most of their crawfish to dealers in Assumption, Iberville, St. Martin and St. Mary Parishes, 85.21 percent of those in Quartile 2, 84.68 percent of those in Quartile 3, and 92.42 percent of those in Quartile 4 sell most of their crawfish to dealers within those four parishes.

**Table 11. Respondents' Parish of Residence, By Catch Quartile**

Parish of Residence	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Acadia			1	0.87%				
Ascension	1	1.43%	1	0.87%	4	3.23%	3	1.86%
Assumption	14	20.0%	22	19.13%	31	25.0%	37	22.98%
Avoyelles	2	2.86%	7	6.09%	8	6.45%	2	1.24%
Calcasieu			1	0.87%				
East Baton Rouge	2	2.86%					1	0.62%
East Feliciana	1	1.43%						
Evangeline							1	0.62%
Iberia	7	10.0%	5	4.35%	3	2.42%	4	2.48%
Iberville	9	12.86%	35	30.43%	19	15.32%	29	18.01%
Lafayette			1	0.87%	2	1.61%		
Lafourche					1	0.81%	1	0.62%
Livingston	1	1.43%	3	2.61%	1	0.81%	1	0.62%
Pointe Coupee	1	1.43%	4	3.48%	2	1.61%		
Rapides	1	1.43%						
St. Charles					2	1.61%		
St. Landry			1	0.87%			2	1.24%
St. Martin	11	15.71%	14	12.17%	30	24.19%	67	41.61%
St. Mary	17	24.29%	16	13.91%	15	12.10%	11	6.83%
Tangipahoa	1	1.43%						
Terrebonne	1	1.43%			2	1.61%		
West Baton Rouge			2	1.74%				
Unknown or Invalid	1	1.43%	2	1.74%	4	3.23%	2	1.24%
<b>Total</b>	<b>70</b>		<b>115</b>		<b>124</b>		<b>161</b>	

**Table 12. Distribution of Years as a Crawfish Harvester among Respondents , By Catch Quartile**

	Usable Observations	Minimum	Maximum	Mean	Median	Mode	Standard Deviation
Quartile 1	70	1	65	17.37	15	1	15.33
Quartile 2	114	1	60	19.89	20	20	14.70
Quartile 3	119	1	74	23.43	20	20	15.79
Quartile 4	159	1	57	24.53	25	30	13.18

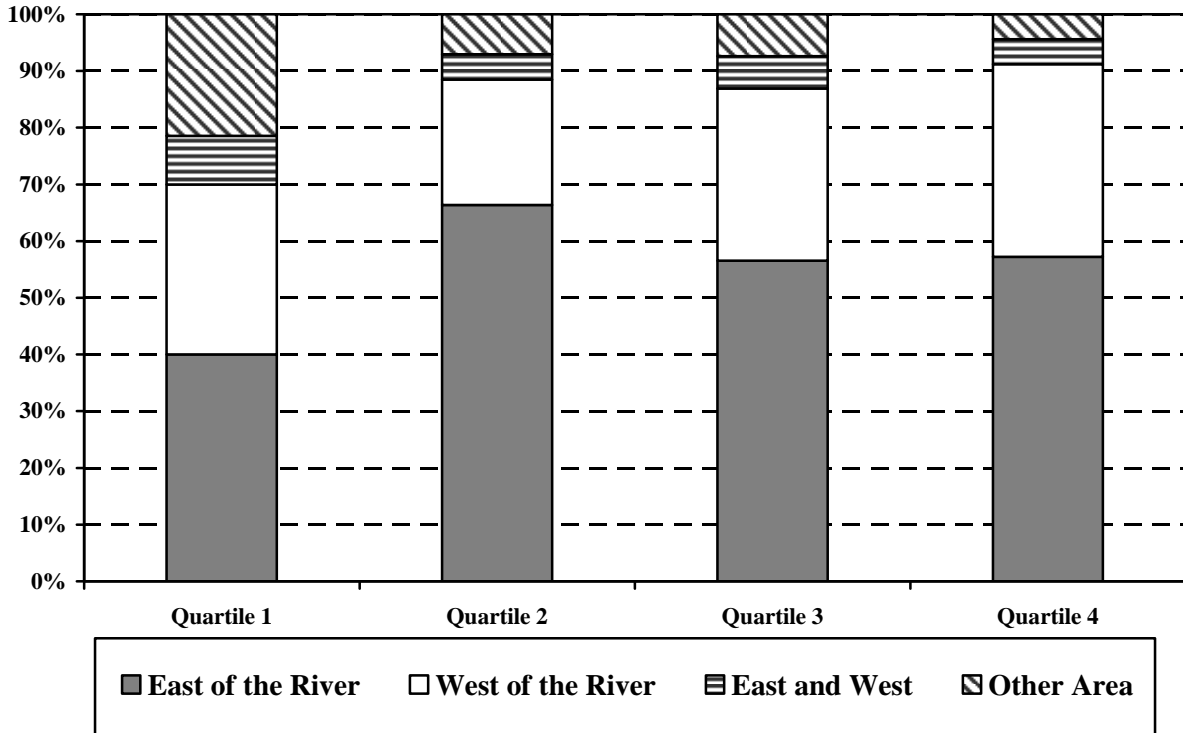
**Table 13. Parish of Crawfish Dealers to Whom Respondents Sold Most of Their Crawfish, By Catch Quartile**

Dealers' Parish	Quartile 1		Quartile 2		Quartile 3		Quartile 4	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Ascension	2	2.86%	1	0.87%				
Assumption	9	12.86%	21	18.26%	37	29.84%	42	26.09%
Avoyelles	3	4.29%	6	5.22%	4	3.23%	2	1.24%
Caddo					1	0.81%		
East Baton Rouge	1	1.43%						
Iberia	3	4.29%	3	2.61%	2	1.61%	4	2.48%
Iberville	10	14.29%	39	33.91%	23	18.55%	38	23.60%
Lafayette							1	0.62%
Lafourche					1	0.81%		
Livingston			1	0.87%				
Plaquemine							1	0.62%
Pointe Coupee	3	4.29%	3	2.61%	5	4.03%		
St. Landry			1	0.87%				
St. Martin	16	22.86%	24	20.87%	35	28.23%	66	40.99%
St. Mary	13	18.57%	14	12.17%	10	8.06%	4	2.48%
Terrebonne					1	0.81%		
Vermilion							1	0.62%
Multiple Parishes	2 <sup>a</sup>	2.86%	1 <sup>b</sup>	0.87%	3 <sup>c</sup>	2.42%		
Out of State	1 <sup>d</sup>	1.43%	1 <sup>e</sup>	0.87%				
None Identified	7	10.0%	1	0.87%	2	1.61%	2	1.24%
<b>Total</b>	<b>70</b>		<b>115</b>		<b>124</b>		<b>161</b>	
a-Parishes: Assumption & East Baton Rouge b-Parishes: St. Martin and St. Mary c-Parishes: Assumption & Iberville; Assumption & St. Mary; St. Martin & St. Mary d-State: Texas to Florida e-Texas								

Of some additional interest is the fact that while approximately three-quarters of the respondents in Quartile 2 (75.65 percent) and Quartile 3 (76.61 percent) live in Assumption, Iberville, St. Martin, and St. Mary Parishes, somewhat larger percentages sell most of their crawfish to a dealer within those parishes (85.21 percent for Quartile 2 and 84.68 percent for Quartile 3).

There also appear to be some differences in terms of where respondents within each quartile harvest their crawfish (Figure 10). Approximately one-fifth (21.43 percent) of the respondents in Quartile 1 harvest most of their crawfish in some “other area” outside the Atchafalaya Basin, far more than the percentages of respondents in Quartile 2 (7.08 percent), Quartile 3 (7.38 percent), and Quartile 4 (4.40 percent) who claim to get most of their crawfish from areas outside the Atchafalaya Basin. Furthermore,

**Figure 10. Respondents' Primary Crawfish Harvest Areas,  
By Catch Quartiles**

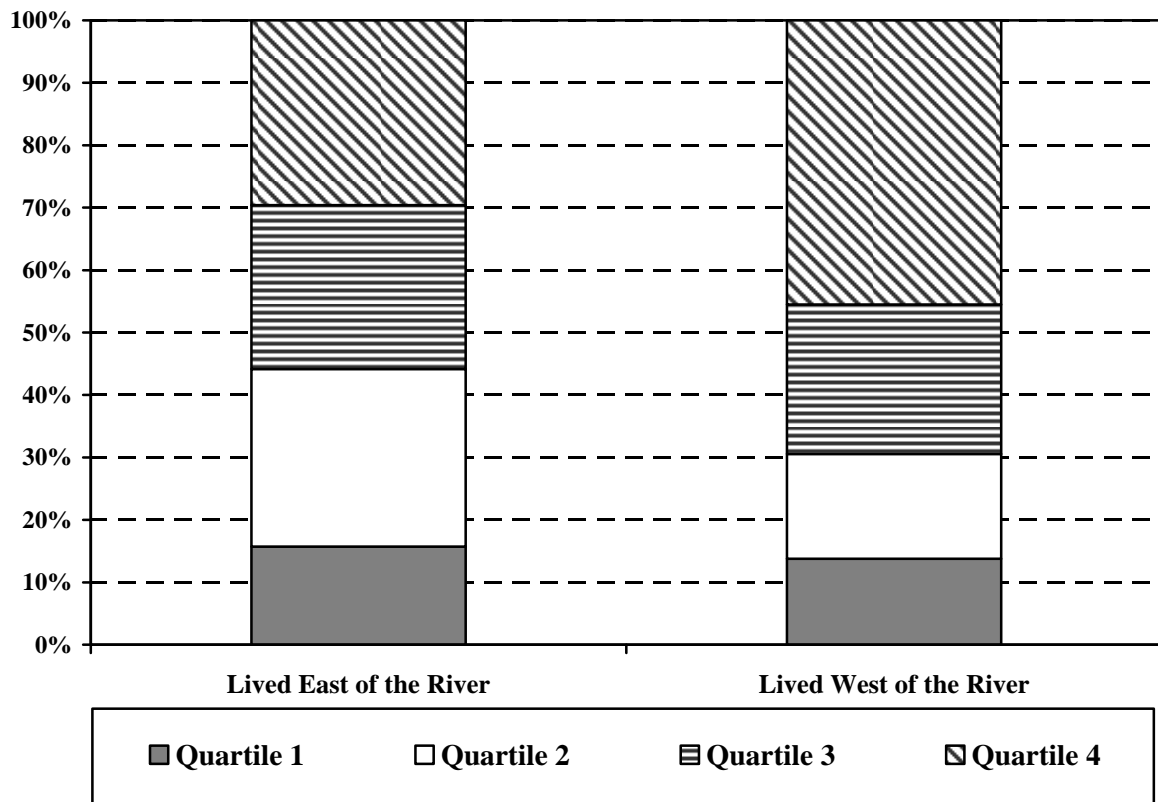


while 40.0 percent of the respondents in Quartile 1 reported harvesting most of their crawfish within the Basin east of the Atchafalaya River, the majority of those in Quartile 2 (66.37 percent), Quartile 3 (56.56 percent), and Quartile 4 (57.23 percent) claimed to have obtain most of their commercial crawfish from the east side of the river.

**Catch Quartiles According to Place of Residence in Reference to the Atchafalaya River**

As determined by the percentage of respondents within catch quartiles, the respondents who live on the west side of the Atchafalaya River are somewhat more likely to harvest larger quantities of crawfish than those residing on the east side of the river (Figure 11). While 55.8 percent of the respondents who lived on the east side of the river were in Quartile3 and Quartile 4, 69.5 percent of the respondents who resided on the west side of the river were in Quartiles 3 and Quartile 4. Over one-quarter (28.5 percent) of the respondents who lived on the east side of the river were in Quartile 2. Approximately one-sixth (16.8 percent) of those on the west side were in Quartile 2.

**Figure 11. Catch Quartiles by Respondents' Place of Residence in Reference to the Atchafalaya River**



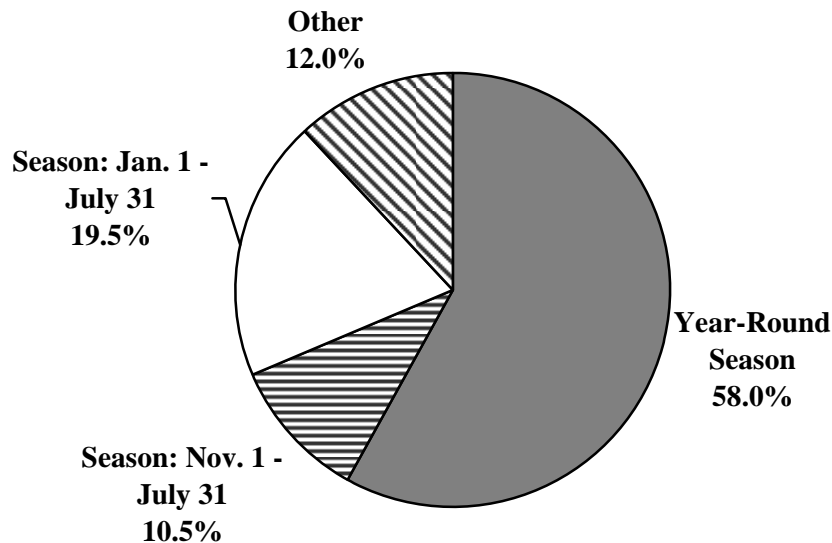


## Respondents' Perspectives on Establishing a Commercial Crawfish Season

In a multiple-choice question, respondents were asked to indicate their preferences regarding the imposition of a commercial crawfish harvesting season in Louisiana. They were requested to mark their preferences for one of the following alternatives: (a) to maintain the current year-round harvest, (b) to set a season from November 1 to July 31, (c) to set a season from January 1 to July 31, or (d) to set a season beginning and ending on some “other” dates of the respondents’ own specifications.

The majority of respondents (58.0 percent) preferred maintaining the current system of year-round commercial crawfish harvests (Figure 12). One-fifth preferred a season from January 1 to July 31 and one-tenth from November 1 to July 31. Approximately twelve percent preferred some “other” season designation. Their suggestions for season beginning and end dates are presented in Box 2.

**Figure 12. Preferences Regarding Crawfish Seasons among 2010 Louisiana Crawfisherman Survey Respondents**



**Box 2. “Other” Suggestions for Season Start Dates and End Dates**

<u>Suggested Season Start Date</u>	<u>Suggestion Season End Date</u>
October	August
November 1	June 30
November 1	July 10
November 1	July 15
November 1	July 31
November 1	July 1
November	June 30
December 1	July 31
December 1	August 1
December	June
January 1	June
January 1	June 30
January 1	June 30
January 30	July 1
January 1	July 4
January 1	July 10
January 1	July 31
January 1	July 31
January 1	August 31
January	August
February 1	June 30
February 1	June 30
February 1	June 30
February 1	June 30
February 1	June 30
February 1	June 30
February 1	June 30
February 1	June 30
February 1	June 30
February 1	July 1
February 1	July 1
February 1	July 15
February 1	July 31
February 1	July 31
February 1	July 31
February 1	July 31
February 1	July 31
February 1	July 31
February 1	July 31
February 1	August 31
February 1	August 31
February 15	June 15
February 15	July 31
February 20	June 30
February 20	July 31
February	July 31
February	July

**Box 2. “Other” Suggestions for Season Start Dates and End Dates (Continued)**

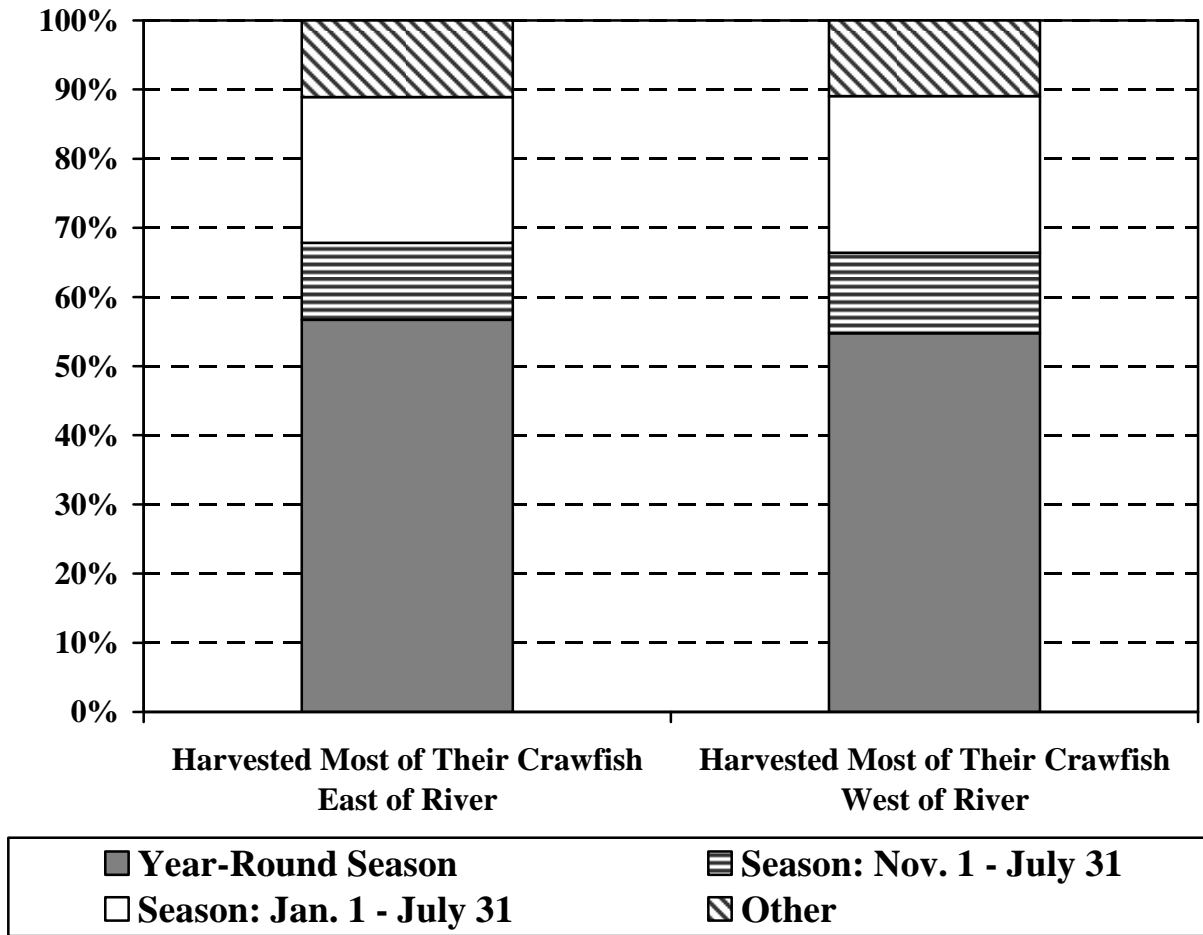
<u>Suggested Season Start Date</u>	<u>Suggestion Season End Date</u>
March 1	June 31
March 1	July 31
March 1	July 31
March 1	July 31
March 1	July 31
March 1	August 10
March 15	July 15
March or April	July 31
When water is above five feet	Crest at five feet

*Preferences According to Primary Crawfish Harvest Areas*

Figure 13 displays patterns of responses among respondents who harvested most of their crawfish in 2009 on the east side of the Atchafalaya River and the west side of the river. (Responses from those respondents who reported harvesting most of their crawfish on both sides of the river or some “other area” outside the Atchafalaya Basin but are not examined as a separate category for this question because the sizes of their respective subsamples were too small for this type of analysis. Their responses are, of course, part of the analysis all respondents displayed in Figure 12.)

The majority of respondents who harvest most of their crawfish on the east side of the Atchafalaya River (56.70 percent) or the west side of the river (54.74 percent) preferred to maintain the current system of allowing year-round commercial crawfish harvests. Approximately eleven percent of each subsample preferred a season from November 1<sup>st</sup> to July 31<sup>st</sup> and approximately 22 percent of each subsample preferred a season from the beginning of January to the end of July.

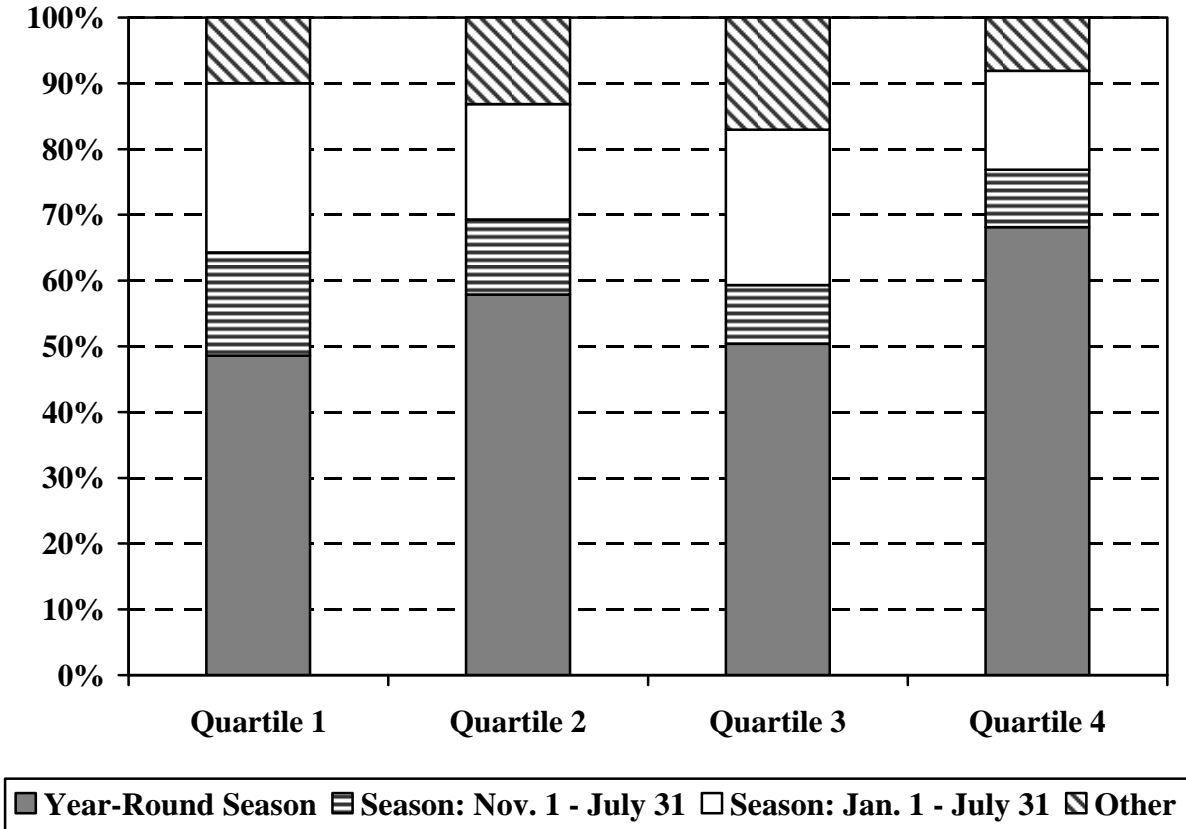
**Figure 13. Preferences Regarding Crawfish Seasons,  
By Respondents' Primary Crawfish Harvest Area**



*Preferences According to Catch Quartiles*

There were some differences in the patterns of preferences regarding the imposition of a commercial crawfish season among those respondents in different quartiles (Figure 14). While majorities of less than sixty percent in Quartile 2 (57.89 percent) and Quartile 3 (50.41 percent) preferred maintaining the year-round commercial crawfish harvest, two-thirds (66.7 percent) of those in Quartile 4 wished to keep the current system. In contrast, a mere plurality 48.57 percent of the respondents in Quartile 1 preferred keeping the current year-round commercial crawfish harvest, implying that a majority of those in this group indicated a preference for some kind of a more limited commercial crawfish season.

**Figure 14. Preferences Regarding Crawfish Seasons, By Catch Quartiles**

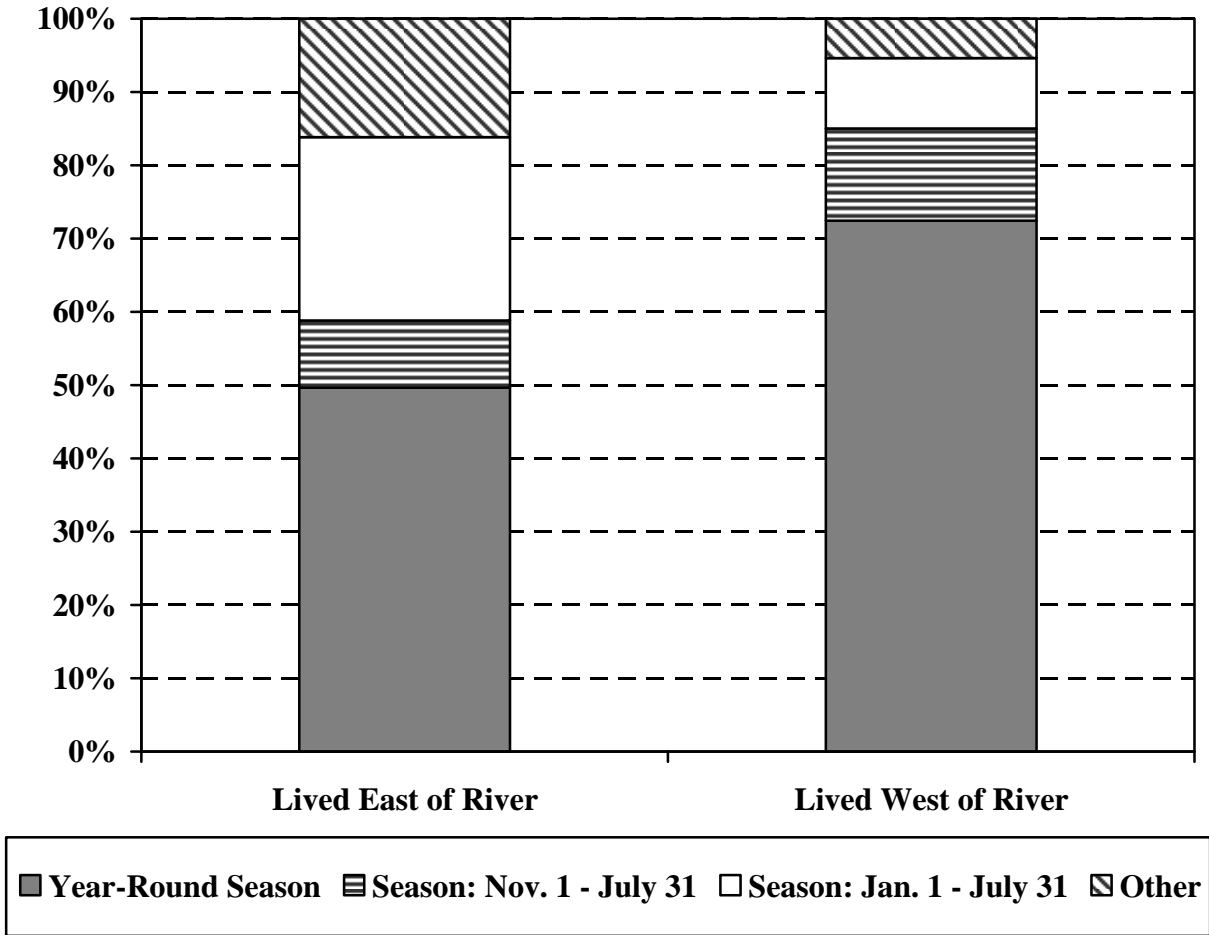


*Preferences According to Respondents' Place of Residence in Reference to the Atchafalaya River<sup>5</sup>*

Respondents who resided in an area to the west of the Atchafalaya River expressed a stronger preference for maintaining the current year-round commercial crawfish harvest season (Figure 15). While a large plurality (49.6 percent) of those on the east side of the river preferred the current regulation, nearly three-quarters (72.5 percent) of those on the west side of the river wished to keep the year-round season. On the other hand, one-quarter (25.0 percent) of those who reside on the east side of the river preferred a season from January 1 to July 31, a season preferred by only 9.6 percent of the residence on the west side.

<sup>5</sup> Responses from respondents who lived to the north of the Atchafalaya River were not included in this analysis because of the small size of the subsample

**Figure 15. Preferences Regarding Crawfish Seasons,  
By Place of Residence in Reference to the Atchafalaya River**

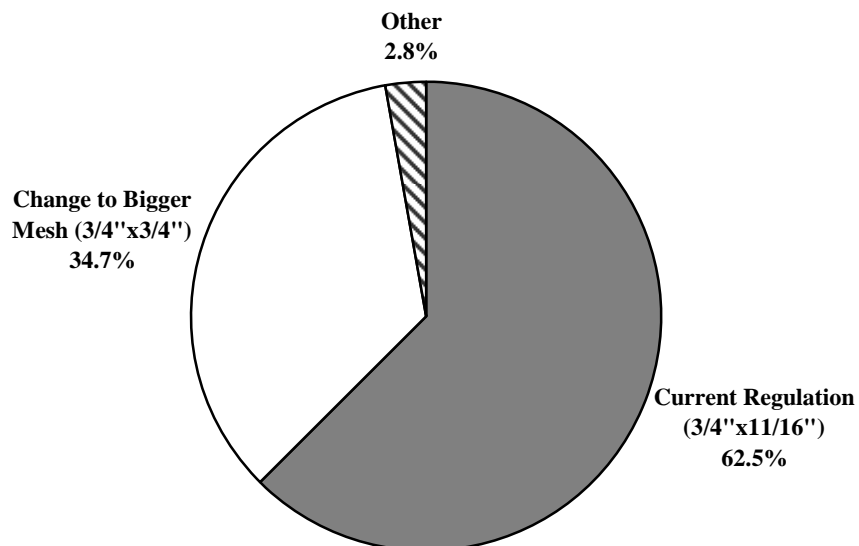


## Respondents' Perspectives on Changing the Minimum Regulatory Mesh Size for Commercial Crawfish Traps

In a second multiple choice question, respondents were also asked their preferences regarding regulations concerning the minimum mesh size for commercial crawfish traps. They were asked to mark their preferences for one of the following three alternatives: (a) maintaining the current minimum mesh size (3/4-inch by 11/16-inch), (b) changing to a larger minimum mesh size (3/4-inch by 3/4-inch), or (c) changing to some "other" minimum mesh size of the respondents' own specifications.

The majority of respondents (62.5 percent) indicated a preference to maintain the current minimum mesh size (Figure 16). Over one-third (34.7 percent) preferred a larger 3/4-inch by 3/4-inch minimum mesh size. Of the 2.8 percent who marked the "other" alternative, roughly half (seven respondents) preferred no minimum regulatory mesh size at all (Box 3).

**Figure 16. Preferences Regarding Mesh Size Regulations among 2010 Louisiana Crawfisherman Survey Respondents**



**Box 3. “Other” Preferences for Minimum Regulatory Mesh Size**

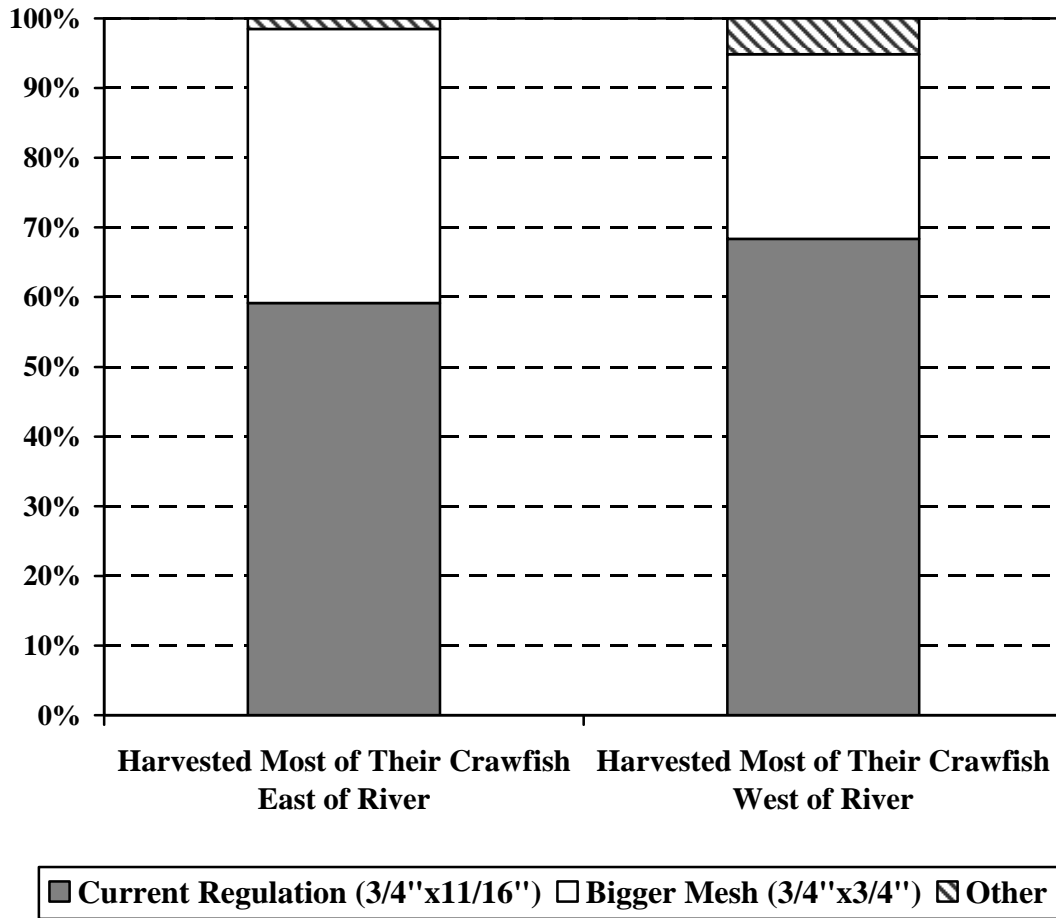
- ¾-inch by 15/16-inch that's your trap, ¾ mesh wire
- 11/16-inch by 11/16-mesh
- ¾-inch by 15/16-mesh, that's your true ¾-inch mesh
- ¾-inch only
- ¾-inch or 9/16-inch
- ¾-inch by 1-inch
- There shouldn't be any regulations on size or shape.
- No regulation on mesh size
- No regulation
- No mesh size. If the crawfish is too small, people won't buy them.
- No regulations at all
- Any size
- No regulation

*Preferences According to Primary Crawfish Harvest Areas*

A preference for maintaining the current minimum required mesh size is seen among the majority of respondents, regardless of where they harvested most of their crawfish in 2009 (Figure 17). Almost sixty percent (59.16 percent) of those who harvested most of their crawfish on the east side and almost seventy percent (68.38 percent) of the respondents who harvested most of their crawfish on the west side of the Atchafalaya River preferred the current minimum mesh size of ¾-inch by 11/16 inch. (Again, the responses from those who reported harvesting most of their crawfish on both sides of the river or some “other area” outside the Atchafalaya Basin were excluded from this analysis because the sizes of their respective subsamples were too small for type of analysis. Their responses are, of course, part of the analysis all respondents displayed in Figure 16.)



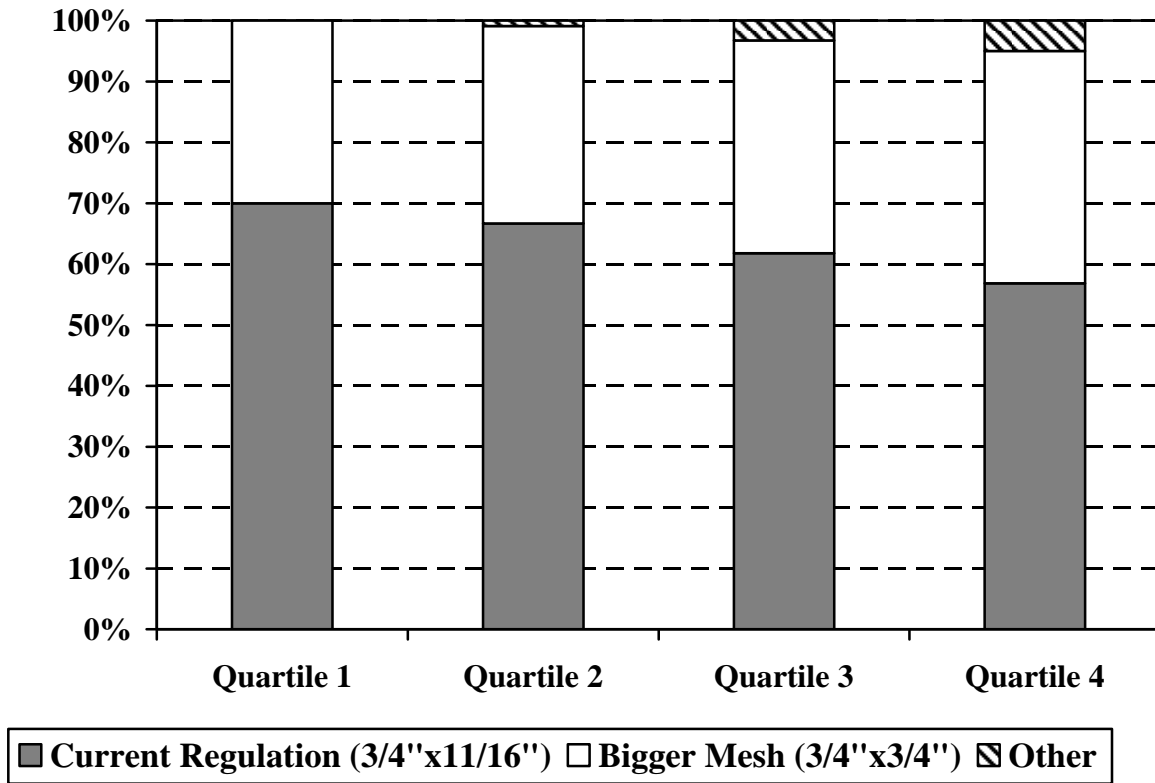
**Figure 17. Preferences Regarding Mesh Size Regulations, By Primary Crawfish Harvest Area**



*Preferences According to Catch Quartiles*

There were apparent differences in the patterns of responses from those in different quartiles (Figure 18). The percentage that preferred keeping the current mesh size was 70.0 percent for Quartile 1, 66.7 percent for Quartile 2, 61.79 percent for Quartile 3, and 56.88 percent for Quartile 4.

**Figure 18. Preferences Regarding Mesh Size Regulations, By Quartile**

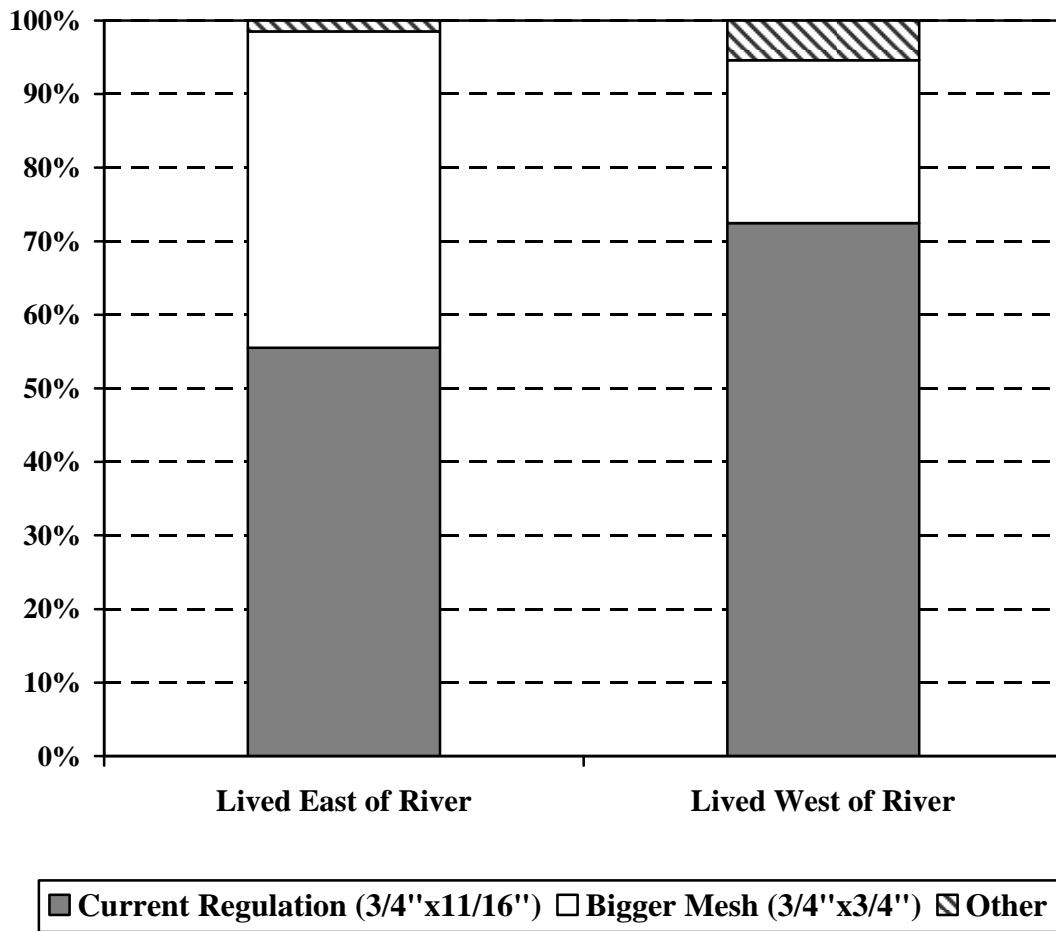


*Preferences According to Respondents' Place of Residence in Reference to the Atchafalaya River<sup>6</sup>*

A majority of respondents on both the east side (55.5 percent) and the west side (72.5 percent) of the Atchafalaya River prefer to maintain the current minimum mesh size of 3/4-inch by 11/16-inch (Figure 19). Though still a minority view, there is a larger preference for increasing the minimum mesh size to 3/4-inch by 3/4-inch among resident on the east side of the river (43.0 percent) than among those residing on the west side of the river (22.2 percent).

<sup>6</sup> Responses from respondents who lived to the north of the Atchafalaya River were not included in this analysis because of the small size of the subsample.

**Figure 19. Preferences Regarding Mesh Size Regulations, By Place of Residence in Reference to the Atchafalaya River**

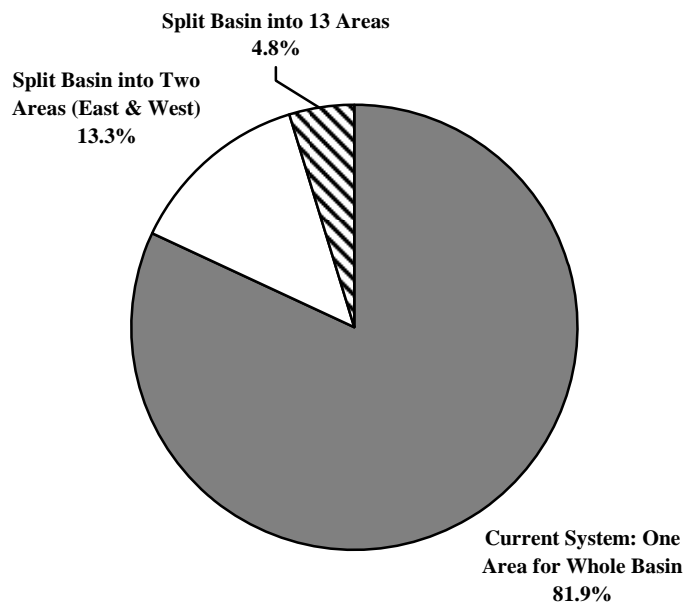


## Respondents' Perspectives on Changing the Number of Trip Ticket Reporting Area Designations

Regarding trip ticket area reporting designations, respondents were asked whether they preferred (a) to maintain the current number of reporting areas for the Atchafalaya Basin or (b) to split the Basin into two reporting areas or (c) thirteen reporting areas. A large majority (81.9 percent) preferred keeping one area for the entire Atchafalaya Basin (Figure 20).

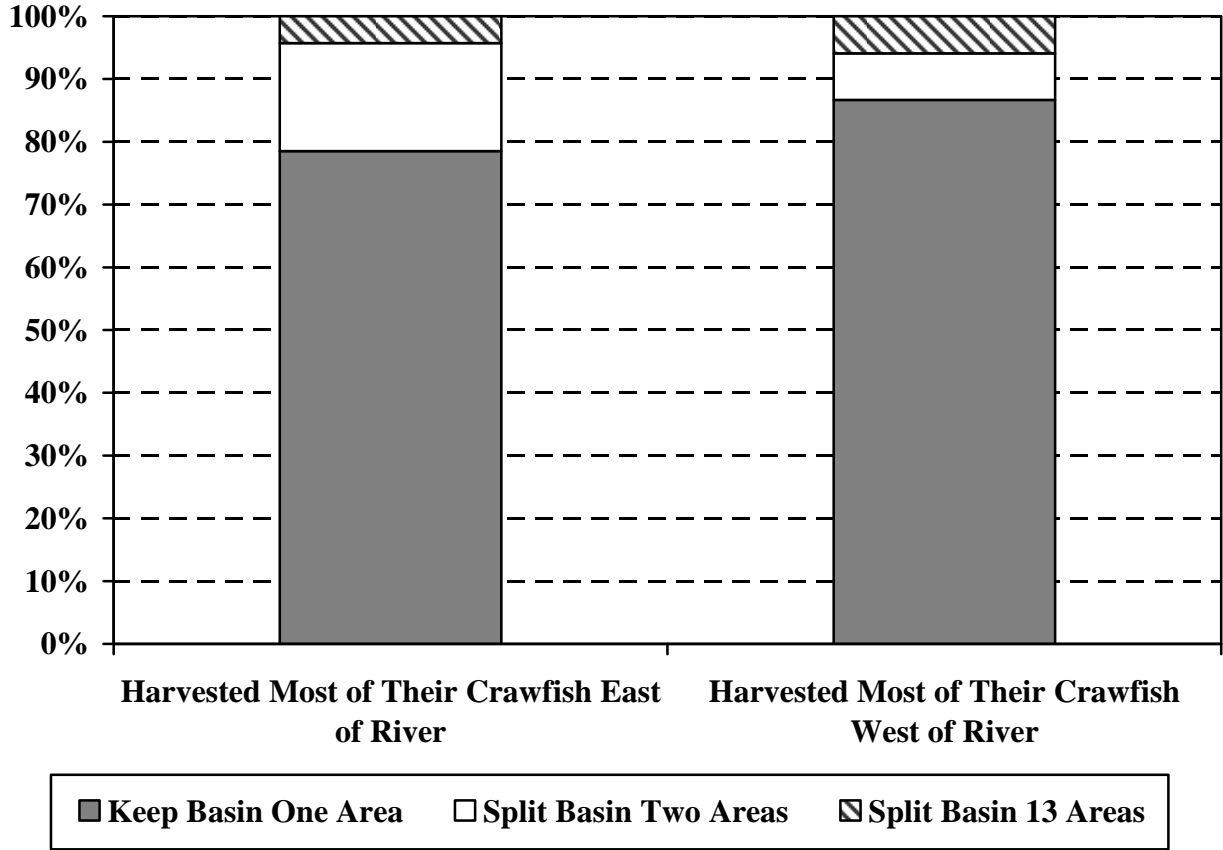
There is no apparent support for changing the number of reporting areas within the Atchafalaya Basin within any subgroup identifiable in this survey. Over seventy percent of all subsamples or categories - whether designated by primary wild crawfish harvest areas<sup>7</sup> (Figure 21) or crawfish catch quartile (Figure 22) or residence on the east side or the west side of the Atchafalaya River (Figure 23) – prefer to maintain the current standard of one reporting area that encompasses the entire basin.

**Figure 20. Preferences Regarding Trip Ticket Area Designations among 2010 Louisiana Crawfisherman Survey Respondents**

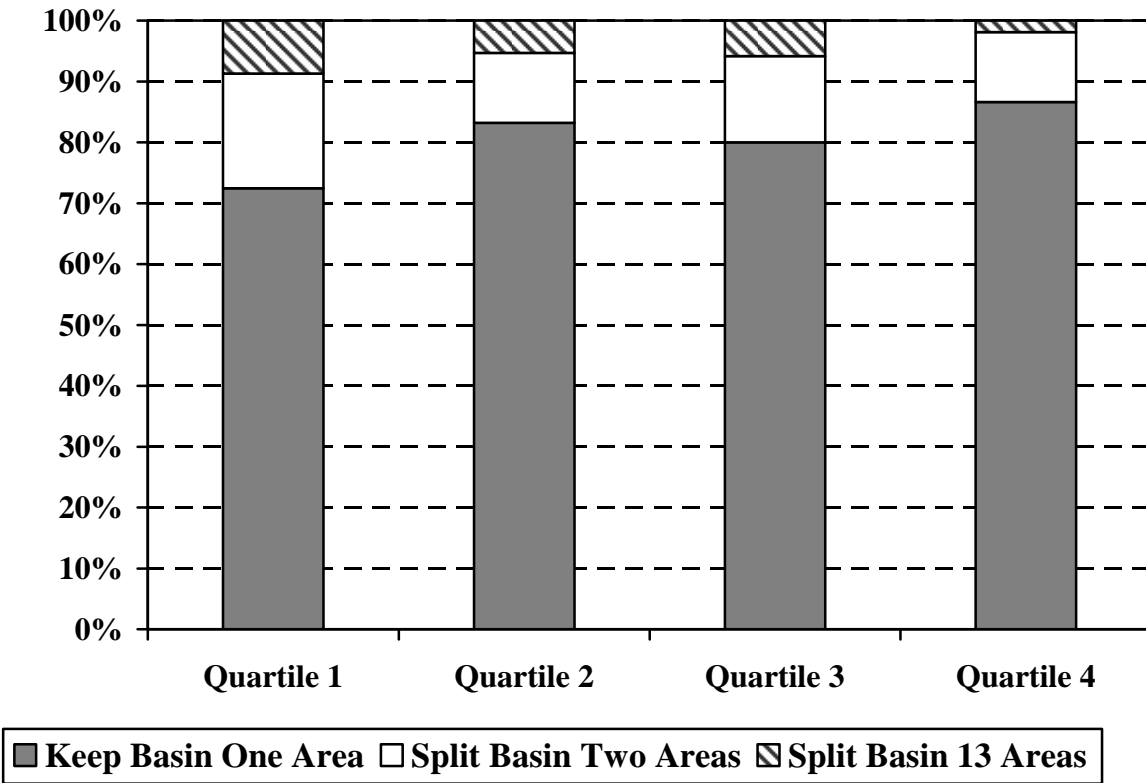


<sup>7</sup> Responses from those respondents who reported harvesting most of their crawfish on both sides of the river or some “other area” outside the Atchafalaya Basin are not examined as a separate category for this question because the sizes of their respective subsamples were too small for this type of analysis. Their responses are, of course, part of the analysis of all respondents displayed in Figure 20.

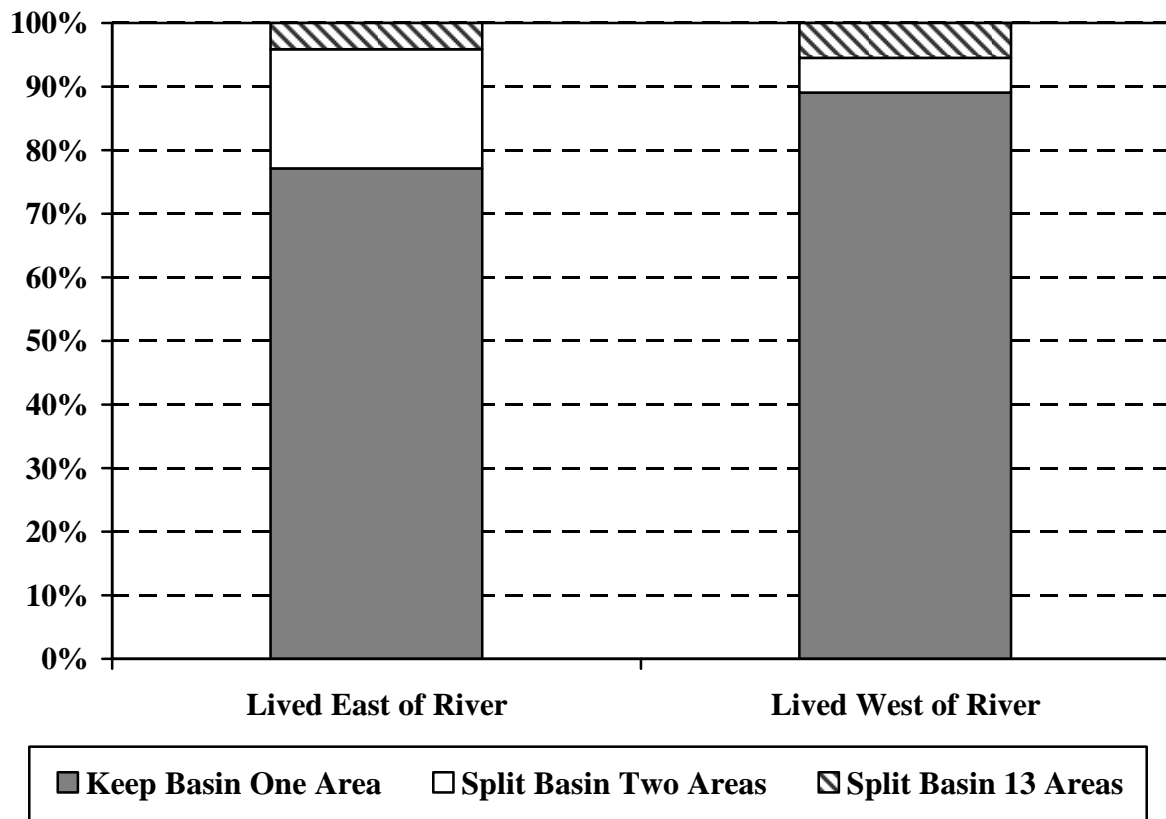
**Figure 21. Preferences Regarding Trip Ticket Area Designations, By Primary Crawfish Harvest Area**



**Figure 22. Preferences Regarding Trip Ticket Area Designation, By Catch Quartile**



**Figure 23. Preferences Regarding Trip Ticket Area Designations, By Place of Residence in Reference to the Atchafalaya River**



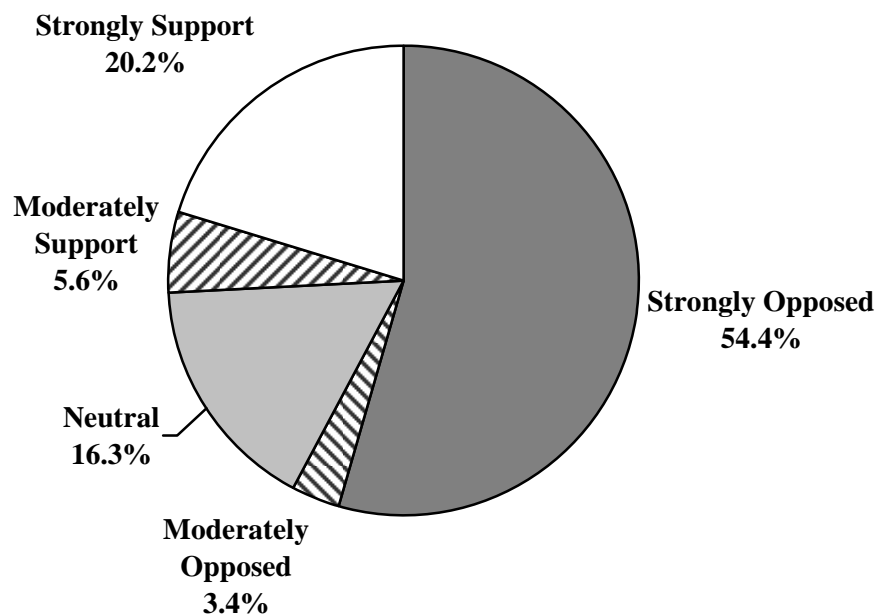
## Respondents' Support for Required Crawfish Trap Tags

Respondents were asked to indicate their level of support for or opposition to a hypothetical regulation requiring the affixing of tags on commercial wild crawfish traps identifying their owners. The majority of respondents (57.8 percent) were strongly or moderately opposed to such a tag requirement (Figure 24). Approximately one-quarter (25.8 percent) were moderately or strongly supportive.

### *Preferences According to Primary Crawfish Harvest Areas*

Some degree of opposition to a hypothetical required trap tag regulation was expressed by a majority of respondents in each major primary crawfish harvest area category<sup>8</sup> (Figure 25). The degree of

**Figure 24. Degree of Support for Requiring Crawfish Trap Tags among 2010 Louisiana Crawfisherman Survey Respondents**



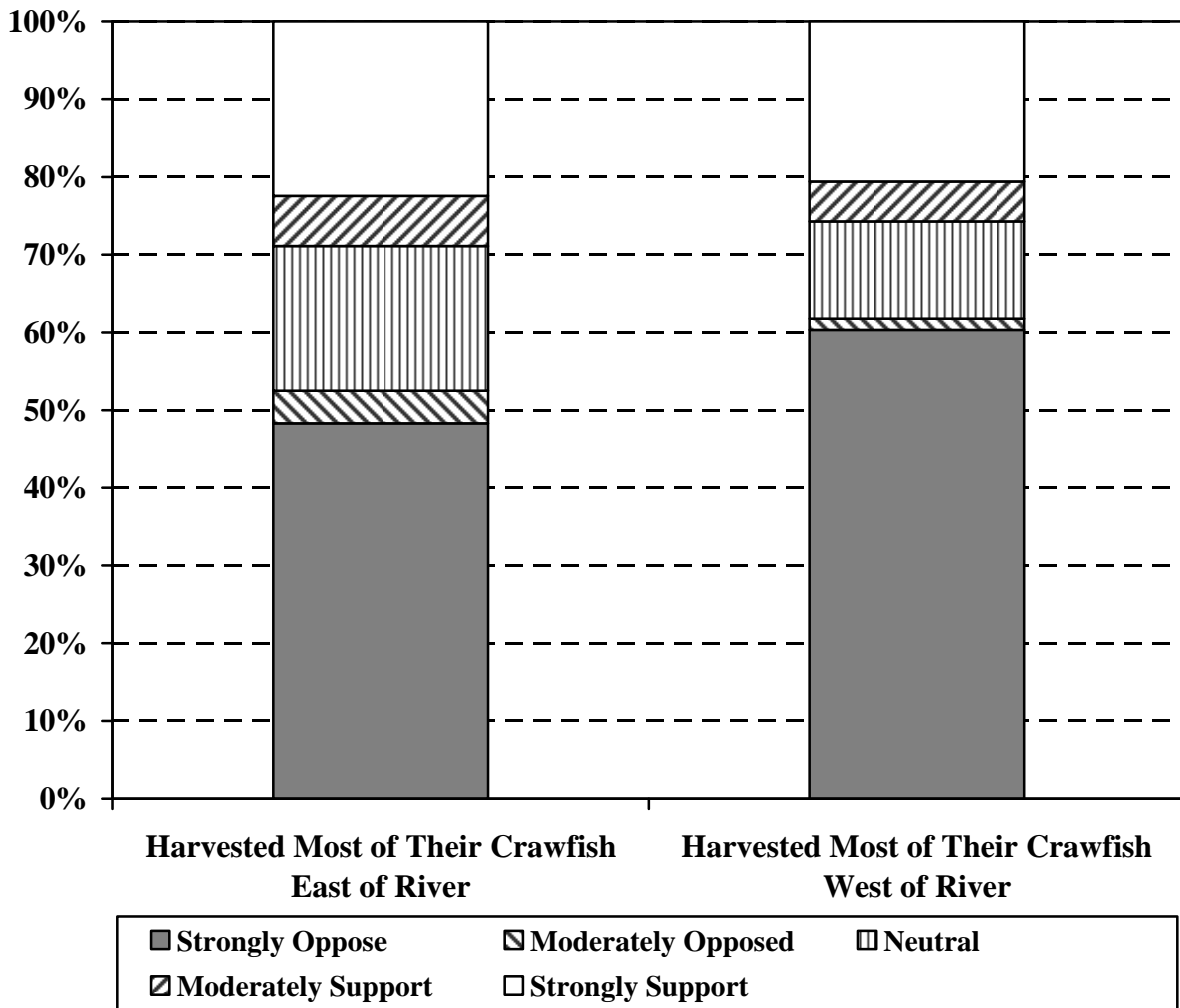
<sup>8</sup> Responses from those respondents who reported harvesting most of their crawfish on both sides of the river or some "other area" outside the Atchafalaya Basin are not examined as a separate category for this question because the sizes of their respective subsamples were too small for this type of analysis. Their responses are, of course, part of the analysis of all respondents displayed in Figure 24.



opposition is evidently stronger among those who harvest most of their crawfish on the west side of the Atchafalaya River (61.76 percent moderately or strongly opposed) than among those who harvested primarily on the east side of the river (52.47 percent moderately or strongly opposed).

There appears to be a larger degree of “neutral” responses among those who harvest most of their crawfish from the east side of the river (18.63 percent) than among those who harvest primarily from the west side of the river (12.50 percent).

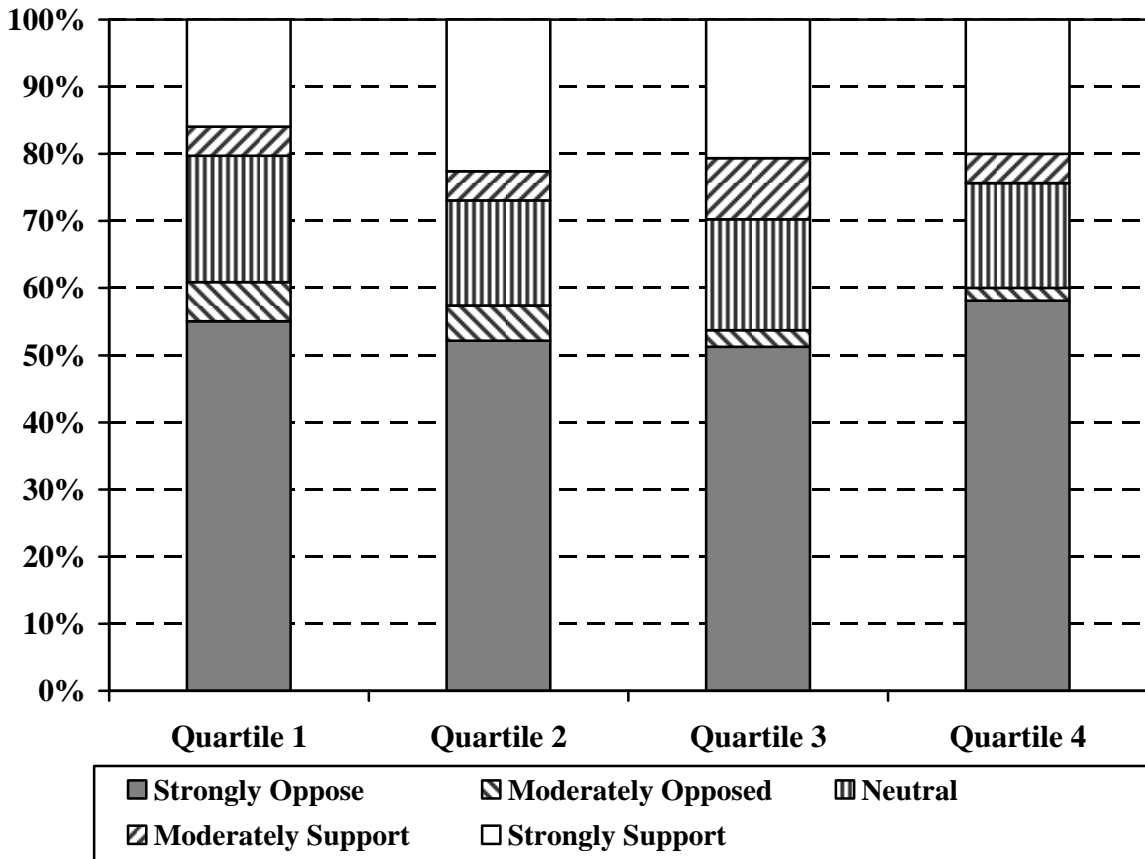
**Figure 25. Degree of Support for Trap Tag Regulation, By Primary Crawfish Harvest Area**



*Preferences According to Catch Quartiles*

The majority of respondents within each quartile expressed some degree of opposition to a hypothetical required crawfish trap tag regulation (Figure 26). The degree of opposition was somewhat stronger among those in Quartile 1 (60.87 percent moderately or strongly opposed) and Quartile 4 ((60.01 percent moderately or strongly opposed) than among those in Quartile 2 (57.37 percent strongly or moderately opposed) or Quartile 3 (53.72 percent strongly or moderately opposed). Quartile 1 reported the lowest level of support (20.29 percent moderately or strongly support) and Quartile 3 the highest level of support (29.75 percent moderately or strongly support).

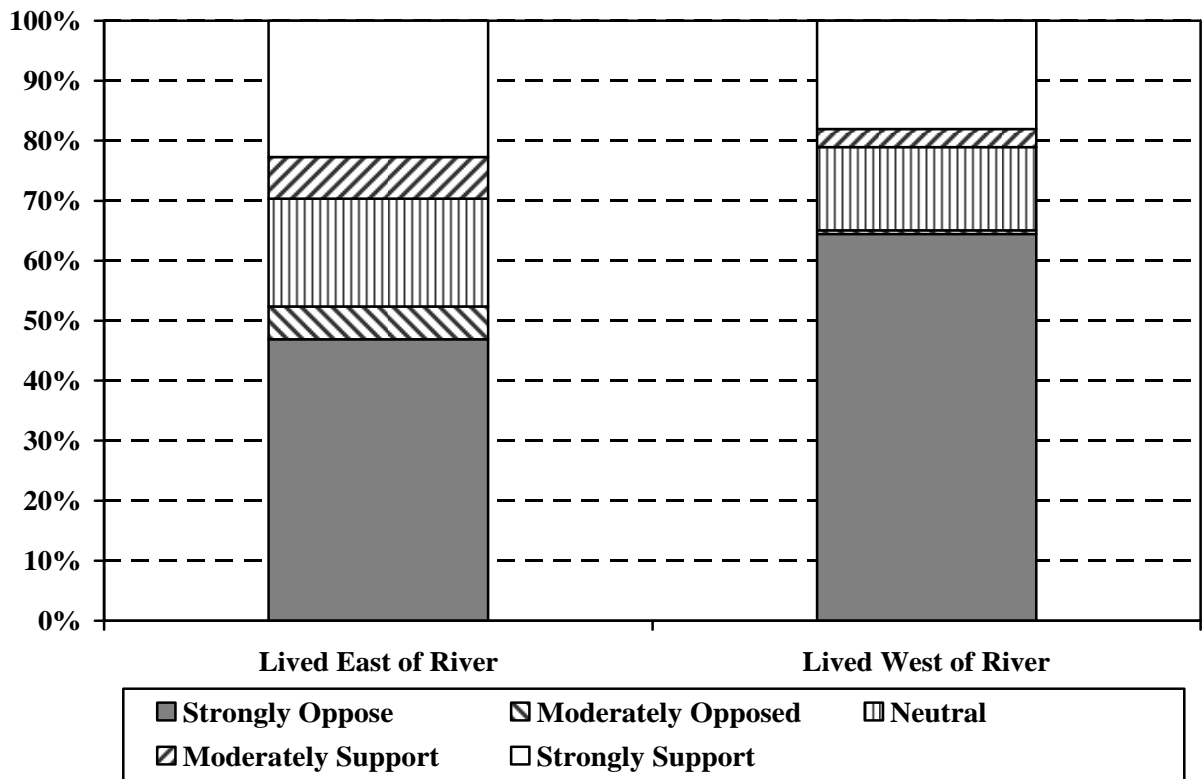
**Figure 26. Degree of Support for Trap Tag Regulation, By Catch Quartiles**



***Preferences According to Respondents' Place of Residence in Reference to the Atchafalaya River<sup>9</sup>***

There was an apparent difference in the degree of opposition to or support of a hypothetical trap tag requirement based on respondents' place of residence in reference to the Atchafalaya River (Figure 27). Though a majority of respondents on either side of the river oppose the hypothetical regulation, a larger portion of those living on the west side of the River (65.1 percent) than those on the east side (52.4 percent) moderately or strongly oppose the measure. A smaller portion of the respondents residing on the west side of the river (21.1 percent) than those on the east side (29.7 percent) expressed moderate or strong support for requiring tags on crawfish traps.

**Figure 27. Degree of Support for Trap Tag Regulation, By Place of Residence in Reference to the Atchafalaya River**



<sup>9</sup> Responses from respondents who lived to the north of the Atchafalaya River were not included in this analysis because of the small size of the subsample.

## **Written Responses to Open-Ended Items**

Survey respondents provided hundreds of written responses to the two open-ended questions included on the questionnaire. The first of these open-ended questions asked respondents to identify what they believe is the major problem facing the Louisiana wild crawfish industry today. The second open-ended question solicited general comments and suggestions. The written comments, too voluminous for this report, were transcribed and distributed to the head of the Louisiana Department of Wildlife and Fisheries Inland Fisheries Division.

Over ninety percent (93.40 percent) of all respondents provided some kind of written response to the question, “What do you believe is the major problem facing the Louisiana wild crawfish industry today?” The majority of comments related to water quantity, water quality, imported crawfish, and competition from farmed crawfish.

Sixty percent (60.43 percent) of the respondents provided some kind of general written comments or suggestions in addition to the responses to the question above. The majority of these general comments related to water issues, crawfish farm issues, commercial harvesting seasons, Louisiana Department of Wildlife and Fisheries policies and law enforcement efforts, and trap tags.

## **Conclusions**

This research combined existing data from the LDWF Commercial License database and trip ticket files and results from the *2010 Louisiana Commercial Crawfisherman Survey* to reveal some salient details regarding active resident commercial crawfish harvesters and their harvesting activities. For example, an examination of the trip ticket data revealed the fact that over two-thirds of the commercial wild crawfish landed between July 1, 2008 and June 30, 2009 were harvested by 282 crawfish harvesters, approximately twenty-five percent of the population of active resident crawfish harvesters. Half of the commercial fishermen landed 8,376 pounds or less (and three-quarters 22,888 pounds or less). Using an average dockside price of 60.4¢ in 2008, according to National Marine Fisheries Service data, this means that half of the active resident commercial fishermen obtained \$5,059 or less in revenue (and three-

quarters of them \$13,824 or less in revenue) from harvesting wild crawfish between July 1, 2008 and June 30, 2009.

This research also revealed that most of the activity associated with wild crawfish harvesting is centered in the Atchafalaya Basin or within the boundaries of four parishes in the Basin area. Nearly three-quarters (74.11 percent) of the commercial landings of wild crawfish in 2008 were harvested in a single trip-ticket reporting area (Area 0105) that encompasses most of the Atchafalaya Basin. Of the survey respondents, 91.6 percent reported harvesting most of their crawfish within the Basin; more than half (56.7 percent) on the east side of the Atchafalaya River. Most of the respondents live and sell most of their crawfish in or near the Basin in Assumption, Iberville, St. Martin, and St. Mary Parishes.

Respondents were presented proposals for altering existing three regulations or management practices: replacing the current year-round commercial crawfish harvest season with a more limited season, replacing the existing minimum regulatory mesh size, or changing the existing trip ticket area designation for the Atchafalaya Basin from one reporting area to multiple reporting areas. For each of these, the majority of respondents preferred the *status quo*. Similarly, a majority of respondents were strongly or moderately opposed to a hypothetical trap tag requirement regulation.

## Appendix

### *Louisiana Crawfisherman Survey 2010* Questionnaire



**All answers to this survey will be strictly anonymous and confidential.**



## Louisiana Commercial Crawfisherman Survey - 2010

Please answer the following questions. All answers will be anonymous and confidential.

1. Currently the commercial crawfish season lasts all year round. Which one of the following do you prefer? (Please circle only one.)
  - A Keep the current year-round commercial crawfish season
  - B A commercial crawfish season from November 1 to July 31
  - C A commercial crawfish season from January 1 to July 31
  - D A commercial crawfish season from \_\_\_\_\_ to \_\_\_\_\_
  
2. Currently regulations say commercial crawfish traps have to use a minimum mesh size of  $\frac{3}{4}$ -inch by  $1\frac{1}{16}$ -inch. Which of the following do you prefer? (Please circle only one.)
  - A Keep the current regulation:  $\frac{3}{4}$ -inch by  $1\frac{1}{16}$ -inch mesh size
  - B Change the regulation to  $\frac{3}{4}$ -inch by  $\frac{3}{4}$ -inch mesh size
  - C Other (Please specify \_\_\_\_\_)
  
3. Currently, for the purposes of filling out trip tickets, there is only one large area (Area 105) that covers the majority of the Atchafalaya Basin. Which of the following do you prefer? (Please circle only one.)
  - A Keeping the current system: One big area for the entire Basin
  - B Splitting the Atchafalaya Basin into two areas (East & West of the Atchafalaya River) to improve the accuracy of trip ticket reporting
  - C Splitting the Atchafalaya Basin into 13 areas (using the boundaries of the Corps' water management units) to improve the accuracy of trip ticket reporting
  
4. What do you think of requiring a tag on every crawfish trap that identifies who the owner is? (Please circle only one.)
  - A Strongly opposed
  - B Moderately opposed
  - C Neutral
  - D Moderately support
  - E Strongly support



5. Where did you harvest most of your crawfish in calendar year 2009? (Please circle only one.)
- A Atchafalaya Basin – East of the River
  - B Atchafalaya Basin – West of the River
  - C Other (Please specify \_\_\_\_\_)
6. In what parish is the crawfish dealer to whom you sold most of your crawfish in 2009 located?
- \_\_\_\_\_
7. How many years have you been a Louisiana commercial crawfish harvester?
- Approximately \_\_\_\_\_ years
8. What is your ZIP code?
- \_\_\_\_\_
9. What do you think is the major problem facing the Louisiana wild crawfish industry today?
- \_\_\_\_\_
10. If you have any comments or suggestions, please write them in the space below.

**If you have any questions about this survey or the questionnaire, please call Jack Isaacs at (225) 765 - 2605**