# LOUISIANA COMMERCIAL CRAB DEALERS: ANALYZING POINT OF FIRST SALES DATA FOR THE LOUISIANA COMMERCIAL CRAB SECTOR: 2000 - 2009 WITH AN EXAMINATION OF CHANGES IN FIRST RECEIVERS' ACTIVITIES AFTER HURRICANES KATRINA & RITA IN 2005 AND GUSTAV & IKE IN 2008

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# Chapter 1.

## 1.1 Introduction

This report examines the participation and activities of licensed commercial seafood dealers that purchased crabs directly from commercial fishermen between 2000 and 2009. The findings of this report are derived from data obtained in the Louisiana trip ticket program, a mandated recording program in which seafood dealers report to the Louisiana Department of Wildlife and Fisheries (LDWF) the quantity and value of seafood that they buy directly from commercial fishermen.

Data from the trip ticket program are regularly employed to determine the quantity of seafood species harvested commercially in the state. This report uses these data to compile a profile of the dealers who purchased crabs in Louisiana between 2000 and 2009. It also examines changes and trends in the volume and dockside value of crabs with special attention paid to changes experienced after hurricanes Katrina and Rita in 2005 and hurricanes Gustav and Ike in 2008.

This report is part of a series of reports that examines the activities of commercial seafood dealers in Louisiana. Other reports in this series include a general overview of commercial seafood dealers and separate studies of dealers that purchased shrimp, oysters, saltwater finfish, and freshwater finfish.

## 1.2 Purpose of This Study

This study is part of an on-going project by the LDWF to monitor changes in activities among first receivers (or commercial seafood dealers) in the Louisiana commercial crab sector following hurricanes Hurricane Katrina and Rita in 2005. After the incidence of hurricanes Gustav and Ike in September 2008, the scope of the report was expanded to analyze the commercial seafood dealers' activities following all four hurricanes. Specifically, the objectives of the study are:

1. To better understand the impacts of hurricanes on seafood dealers operating in Louisiana's commercial crab sector by using the LDWF "trip ticket" data to track purchases by seafood dealers in

the years before and after the hurricanes. The report presents analysis related to the volume and dockside value of crabs purchased by seafood dealers from 2000 to 2009.

2. To analyze the variation in the size of seafood dealers' purchases by dividing dealers into different crab volume categories defined by the volume of crabs (in pounds) purchased directly from commercial fishermen in a given year. The report observes trends within and across categories from 2000 to 2009. Second, the study also explores the structure of the Louisiana saltwater finfish dealer sector by examining differences in activities among dealers that hold different types of LDWF commercial seafood dealer licenses.
3. Discussion of crab dealer activity in two separate regions: southeast Louisiana and southwest Louisiana.

The analyses will aid in understanding observable changes in Louisiana commercial seafood dealers' activities before and after the 2005 and 2008 hurricanes.

### 1.3. Commercial Seafood Dealers

A commercial seafood dealer is defined conceptually by the function it performs in the marketing chain and technically by the type of license it holds that grants it the legal right to perform that function. Functionally, a commercial seafood dealer is defined as any person, business, or other entity that purchases seafood directly from commercial fishermen for later resale. The term "dealer" may be applied to a wide array of diverse individuals and firms including, but not limited to, docks that buy seafood from fishermen and sell it to processors; seafood processors that buy some portion of the raw product directly from fishermen; and roadside peddlers, seafood shops, restaurants, groceries, and other retailers who get some or all of their seafood products directly from fishermen. The common element is buying or obtaining seafood directly from commercial fishermen.

#### 1.3.1. LDWF Licensed Commercial Seafood Dealers

In this report, a licensed commercial seafood dealer is defined as any person, business, or other entity that holds any of several types of commercial seafood retail/wholesale dealer licenses that grant them the legal privilege to buy seafood directly from commercial fishermen in Louisiana for later resale to another person, business, or other entity. The term "dealer" may also be applied to two additional license types, called "fresh products licenses", for commercial fishermen or their spouses who sell some portion of their seafood harvests at retail or directly to the public.

The Louisiana Department of Wildlife and Fisheries (LDWF) issues several different types of commercial seafood dealer licenses, a selected list of which may be found in Table 1.1. A more comprehensive discussion of the Louisiana seafood dealer licensing system is included in another report in this series: *Commercial Seafood Dealers in Louisiana, 2000-2009: Analyzing Point of First Sales Data from the Louisiana Trip Ticket Program with an Examination of Changes in First Receivers' Activities after Hurricanes Katrina & Rita in 2005 and Gustav & Ike in 2008*.

The LDWF commercial dealer license database contains a limited amount of basic information about each license holder (type of dealer license type, address, and a unique license number). These were connected, anonymously and confidentially, with LDWF trip ticket data to compile a database about seafood dealers' location and license types and the types, volume, dockside value of the seafood that they purchased directly from commercial fishermen in the period from 2000 to 2009.

**Table 1.1. Selected List of Louisiana Commercial Seafood Dealer Licenses**

| **License Title:** | **Appropriate for:** | **Label in This Report:** |
|---|---|---|
| Resident Seafood Wholesale/Retail Dealer License - Business | Louisiana land-based businesses that buy seafood directly from commercial fishermen for later resale | Resident business seafood dealer |
| Resident Seafood Wholesale/Retail Dealer License - Vehicle | Louisiana businesses that buy seafood directly from commercial fishermen and sell that seafood to the public out of a vehicle | Resident vehicle seafood dealer |
| Resident Fresh Products Dealer License | Louisiana resident licensed resident commercial fishermen who wish to sell his or her catch directly to the public | Resident fresh products dealer |
| Resident Fresh Products Dealer - Spouse License | Spouses of licensed Louisiana resident commercial fishermen who wish to sell a portion of his or her spouse's catch directly to the public | Resident fresh products spouse dealer |
| Non-Resident Seafood Wholesale/Retail Dealer License - Business | Out of state land-based businesses that buy seafood directly from commercial fishermen for later resale | Non-resident business seafood dealer |

### 1.4. Louisiana Trip Ticket Program

Since 1999, commercial fishermen and licensed commercial seafood dealers have been required to report the volume and dockside value of commercial seafood landed in Louisiana as part of the Louisiana trip ticket program. Commercial seafood dealers and commercial fishermen must complete a record of the quantity and dockside value of the seafood exchanged at the “point of first sale”. Variables included in the trip ticket report of each transaction include the identification of the species, the volume landed, and the amount paid to the commercial fisherman among others. Dealers submit a copy of the report for each transaction to the Louisiana Department of Wildlife and Fisheries. A comprehensive discussion of the Louisiana trip ticket program and the data it collects are included in another report in this series: *Commercial Seafood Dealers in Louisiana, 2000-2009: Analyzing Point of First Sales Data from the Louisiana Trip Ticket Program with an Examination of Changes in First Receivers’ Activities after Hurricanes Katrina & Rita in 2005 and Gustav & Ike in 2008*.

The data pertaining to the quantity, value, and species of seafood purchased by each dealer were obtained from the trip ticket program and joined, anonymously and confidentially, with corresponding data regarding the location and license type of each dealer by a common variable, the unique commercial seafood dealer license number. Data were analyzed using a variety of statistical packages: SAS, STATA and Microsoft Excel.

#### 1.4.1. Louisiana Trip Ticket Data Considerations

The volume of seafood recorded in trip ticket transactions is an output for commercial fishermen but an input for commercial seafood dealers. The volume of seafood that a dealer reported in the trip ticket program may not represent the total amount of seafood that it purchased, only the quantity that it purchased directly from commercial fishermen in Louisiana. The quantity of seafood that a dealer acquired from other sources, such as processors, distributors, other dealers, or commercial fishermen in other states, is not measured in Louisiana trip ticket transactions.

The value of the seafood traded and recorded in trip ticket transactions is here called “dockside value.” The term “dockside value” represents a source of revenue for commercial fishermen and an expenditure for commercial seafood dealers. The dockside value is a measure of the amount of money each dealer spent in buying seafood directly from commercial fishermen. It may not measure the total amount of money a dealer spent in acquiring seafood because a dealer may have also purchased seafood from additional sources (processors, distributors, other dealers, or commercial fishermen outside Louisiana) that are not recorded in trip ticket transactions.

Only one of many potential expenditures that seafood dealers incur in operating their businesses, dockside value may not reflect a dealer’s total expenses or costs of operation. Further, no inference regarding revenues, profits, or returns can be made from trip ticket data.

### 1.5. Hurricane Incidents in Louisiana in 2005 and 2008

Louisiana was hit by four hurricanes that had a considerable impact on the state’s residents, coastal and marine resources, and commercial seafood sectors within the 2000-2009 study timeframe. This report will examine changes in select parameters of seafood dealer activity that are measured by trip ticket data.

Hurricane Katrina made landfall as a Category 3 hurricane near Buras, Louisiana, in Plaquemines Parish in the southeastern portion of the state on August 29, 2005. It continued northward and made landfall again near the Louisiana-Mississippi boundary (Knabb, Rhome, and Brown, 2005). Hurricane Rita made landfall on September 24, 2005 in southwestern Louisiana between Johnson’s Bayou and Sabine Pass as a Category 3 hurricane (Knabb, Brown, and Rhome, 2006). This report may refer to hurricanes Katrina and Rita as “the 2005 hurricanes” or “the 2005 storms”. It will also make reference to 2005 as “the hurricane year of 2005.”

Hurricane Gustav was a Category 2 hurricane when it made landfall near Cocodrie, Louisiana, on September 1, 2008 (Beven and Kimberlain, 2009). Hurricane Ike made landfall near Galveston Bay, Texas on September 13, 2008 (Berg, 2009). The effects of both storms were felt in Louisiana. Hurricanes

Gustav and Ike may be called “the 2008 hurricanes” or “the 2008 storms” in this report. The year 2008 may be called “the hurricane year of 2008”.

### 1.6. Geographic Regions

This report examines the activities of crab dealers in three different regions of the state based on the location of the commercial seafood dealer license holder. The three regions of Louisiana are defined below (Figure 1.1):

a) Southeast Louisiana which includes the following parishes: Ascension, Jefferson, Orleans, Plaquemines, Lafourche, Livingston, St. Bernard, St. Charles, St. James, St. John the Baptist, St. Tammany, and Tangipahoa.
b) Southwest Louisiana which includes the following parishes: Acadia, Assumption, Avoyelles, Calcasieu, Cameron, Iberia, Iberville, Jefferson Davis, Lafayette, Pointe Coupee, St. Landry, St. Martin, St. Mary, Terrebonne, and Vermilion.
c) Rest of Louisiana which includes all other parishes in the state.

The parishes in southeast Louisiana were affected disproportionately by Hurricane Katrina in 2005. The parishes in southwest Louisiana were disproportionately affected by Hurricane Rita in 2005 and Hurricane Ike in 2008. Hurricane Gustav in 2008 made landfall in south central Louisiana and affected parishes in both southeast Louisiana and southwest Louisiana.

The geographical delineation is based on the location of the commercial seafood dealer and not the place of residence of commercial fishermen or the area in which they harvested their commercial seafood products.

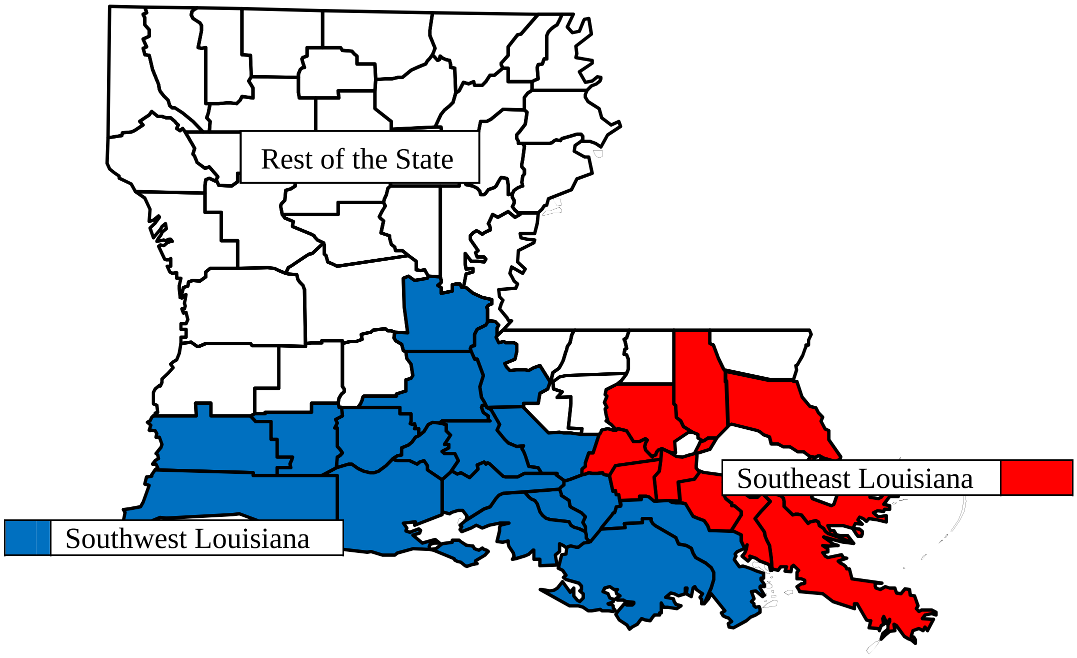


**Figure 1.1. Designation of Southeast and Southwest Louisiana**

## 1.6. Organization of the Study

This report is divided into six chapters. Chapter one outlined the background and objective of this study. Chapter two provides changes and trends for dealer participation and the volume and dockside value of purchases of commercial crab landings among all commercial seafood dealers from 2000 to 2009. Chapter three divides all commercial seafood dealers into crab volume categories based on the volume of crabs that each purchased in a given year. Chapter four examines dealers' purchases of blue crabs and stone crabs by dealer license type. Chapter five considers crab dealers in southeast Louisiana and southwest Louisiana. Chapter six includes a summary and conclusions. Appendices contain summary tables of the data examined in the report.

## Chapter 2.
## Commercial Seafood Dealers in Louisiana That Purchased Crabs

### 2.1. Introduction

Louisiana is the site of one of the most productive blue crab fisheries in the United States. For every year within the 2000 – 2009 study timeframe, the volume of Louisiana blue crab landings was larger than the volume of any other single state, according to NMFS landings data. The dockside value of blue crabs landed in Louisiana was typically second or third in the nation behind Virginia, North Carolina, or both. Louisiana also produces a relatively small quantity of Florida stone crab claws, which accounts for only a small portion of the state's total crab landings. This chapter examines the participation and activity of licensed commercial seafood dealers that purchased crabs directly from commercial fishermen in Louisiana between 2000 and 2009.

### 2.2. Volume and Dockside Value of Crabs

In the first three years of the study timeframe, the volume of crabs purchased by Louisiana seafood dealers varied from 52 million pounds in 2000 to 41.8 million pounds in 2001 to 50.1 million pounds in 2002 (Figure 2.1). Volume declined to 48.0 million pounds 44.4 in 2003 and million pounds in 2004. In 2005 (when hurricane Katrina and Rita hit Louisiana), the volume of dealers' crab purchases declined by 14 percent to a study timeframe minimum of 38 million pounds. Following hurricanes Katrina and Rita, volume climbed to a period maximum of 53.3 million pounds in 2006 but then declined to 44.8 million, and 44.3 million pounds respectively, in 2007 and 2008. In 2009, the year after hurricanes Gustav and Ike, the volume of crabs rose to 52.9 million pounds.

The dockside value of crabs purchased by commercial seafood dealers from commercial fishermen in Louisiana followed a generally downward trajectory before the hurricanes from $34.5 million in 2000 to $29.9 million in 2004 (Figure 2.1). In the hurricane year of 2005, dockside value dropped to a period minimum of $27.6 million. Following hurricanes Katrina and Rita, the dockside value of dealers' crab purchases rose to $32.2 million in 2006 and climbed to a period maximum of $37.2 million in 2009, the year after hurricanes Gustav and Ike.

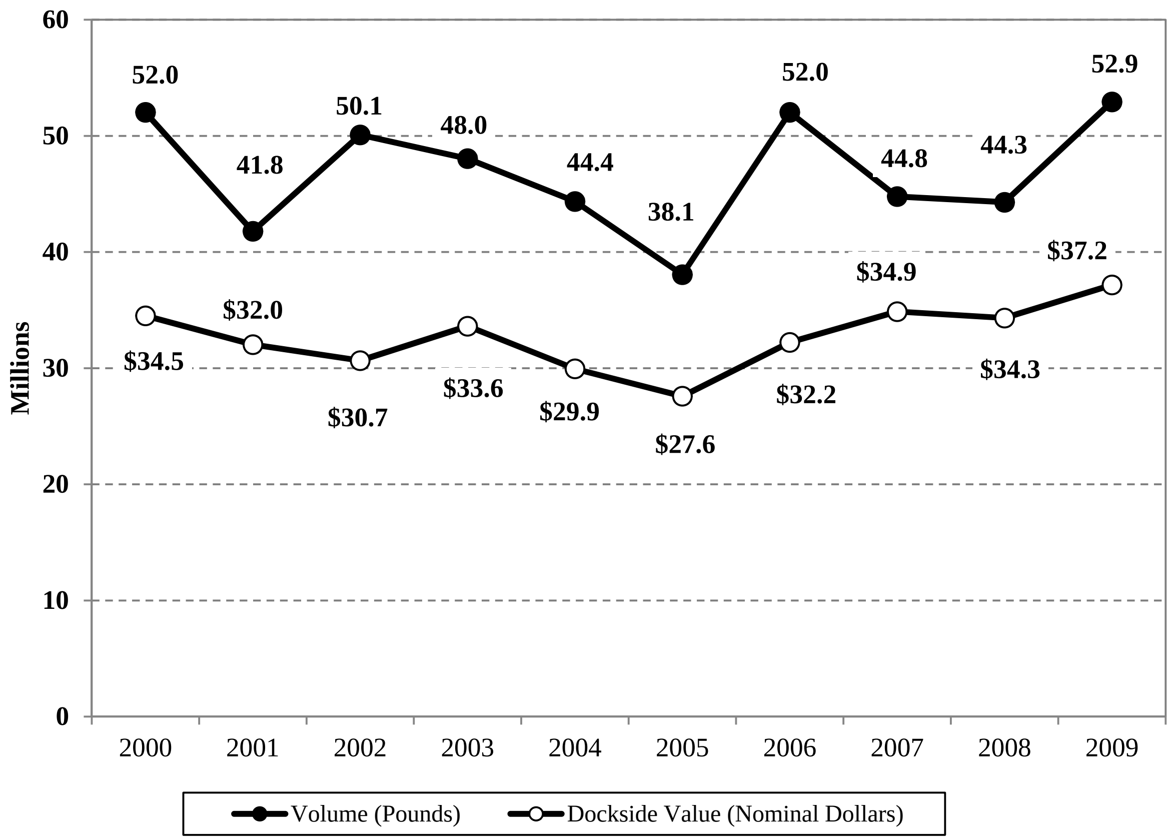


**Figure 2.1. Cumulative Volume and Dockside Value of Crabs Purchased by Louisiana Seafood Dealers Reported in Louisiana Trip Ticket Program: 2000-2009**

## 2.3. Number of Dealers Purchasing Crabs or Active Crab Dealers

This section examines the participation and economic activity of "active crab dealers", defined as any individual or business that held a LDWF commercial seafood dealer license and reported purchasing at least one pound of crabs directly from commercial fishermen in Louisiana in a particular year.

The number of active crab dealers fell from an initial 409 in 2000 to 343 in 2001 (Figure 2.2.) but then rose to 435 in 2004, the year before hurricanes Katrina and Rita. The number dropped by 17.5 in the hurricane year of 2005 to 359 active crab dealers. The number of active crab dealers rose to 385 in 2006 after which it declined to 340 in 2007 and 341 in the hurricane year. In 2009, the number of active crab dealers rose to 371.

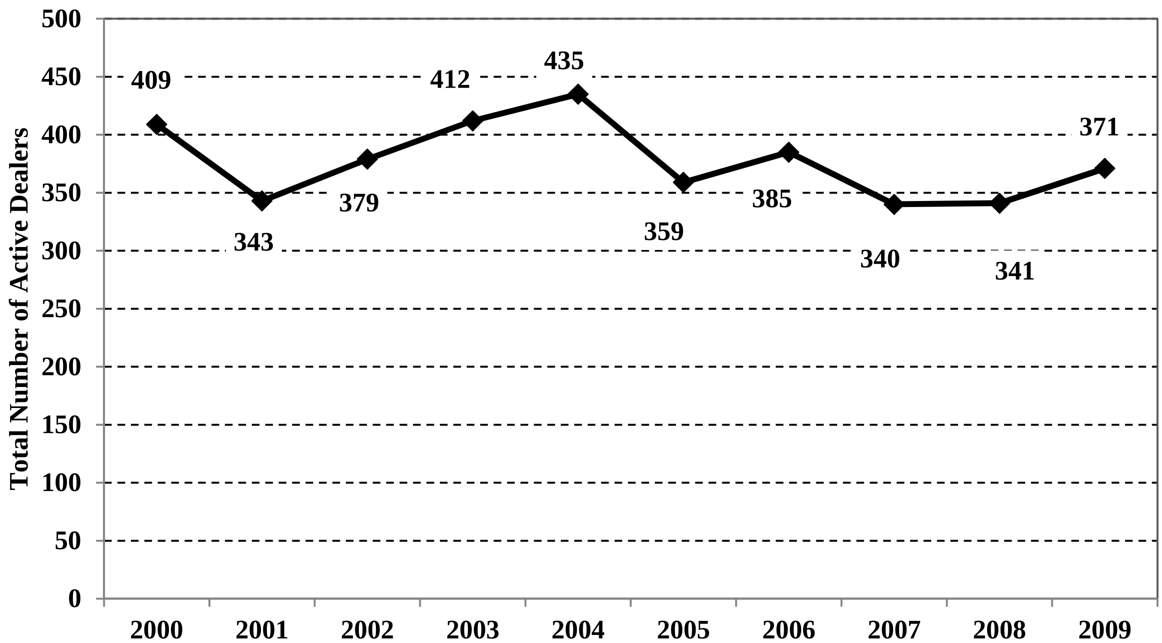


**Figure 2.2. Number of Active Crab Dealers: 2000-2009**

### 2.4. Percentage Changes in Active Dealer Numbers, Volume, and Dockside Value

The tables below (Tables 2.1, Table, 2.2, Table 2.3) show the percentage change of the relevant variable in one year (identified in the column header) relative to the "base year" identified at the start of each column. For example, in Table 2.1, the value in the "2006" row and the "2007" column (-11.7%) means the number of active crab dealers in 2007 (340) was 11.7 percent less than the number in 2006 (385). Similarly, in Table 2.2, the value in the "2005" row and the "2007" column (+17.7%) means the volume of crabs purchased by dealers in 2007 (44,775,293 pounds) was 17.7 percent greater than the volume in 2005 (38,052,304 pounds). (Table 2.2 and Table 2.3 also show that the crab volume in 2004 was 6.1 percent less than the 2000-2004 average volume and dockside value was 6.9 percent less than the average dockside value between 2000 and 2004.)

**Table 2.1. Change in Number of Active Crab Dealers in Specified Year as a Percentage of Number in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | 10.0% | **-9.3%** | **-2.7%** | **-14.1%** | -13.8% | -6.2% |
| | 2004 | | **-17.5%** | **-11.5%** | **-21.8%** | -21.6% | -14.7% |
| | 2005 | | | 7.2% | -5.3% | -5.0% | 3.3% |
| | 2006 | | | | -11.7% | -11.4% | -3.6% |
| | 2007 | | | | | **0.3%** | **9.1%** |
| | 2008 | | | | | | **8.8%** |

**Table 2.2. Change in Volume of Crabs Purchased by Active Crab Dealers in Specified Year as a Percentage of Volume in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | -6.1% | **-19.5%** | **10.1%** | **-5.3%** | -6.3% | 12.0% |
| | 2004 | | **-14.2%** | **17.3%** | **0.9%** | -0.2% | 19.3% |
| | 2005 | | | 36.7% | +17.7% | 16.4% | 39.1% |
| | 2006 | | | | -13.9% | -14.9% | 1.7% |
| | 2007 | | | | | **-1.1%** | **18.2%** |
| | 2008 | | | | | | **19.5%** |

**Table 2.3. Change in Number of the Dockside Value of Crabs Purchased by Active Crab Dealers in Specified Year as a Percentage of Dockside Value in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | -6.9% | **-14.2%** | **0.2%** | **8.5%** | 6.7% | 15.6% |
| | 2004 | | **-7.9%** | **7.6%** | **16.5%** | 14.6% | 24.1% |
| | 2005 | | | 16.8% | 26.4% | 24.4% | 34.7% |
| | 2006 | | | | 8.2% | 6.5% | 15.3% |
| | 2007 | | | | | **-1.6%** | **6.6%** |
| | 2008 | | | | | | **8.3%** |

### 2.5.1. Percentage Changes in Active Dealer Numbers, Volume, and Dockside Value Following Hurricanes Katrina and Rita

Changes in crab dealer participation and activity following hurricanes Katrina and Rita can be examined by observing the percentage changes in volume, dockside value, and the number of active dealers in the hurricane year of 2005 and afterward to the values prior to the storms. The tables present two ways of making such a comparison by expressing the percentage change relative to measure in the single year before the storm (2004) and the percentage relative to the average values in the five-year period before the storm (2000 – 2004 average).

The change in dockside value of crabs may not be attributed to hurricane-related elements alone. Dockside value is the product of volume, which may vary due to a variety of natural and market factors, and price, which may also be related to national and international market forces quite separate from the hurricanes or other local conditions. Further, an increase (or decrease) in the dockside value of crabs signifies an increase (or decrease) in the value of the crabs that dealers bought, an expenditure. A change in dockside value does not indicate a change in revenue or profit.

### 2.5.1. Percentage Changes in Active Dealer Numbers, Volume, and Dockside Value Following Hurricanes Katrina and Rita

Changes in crab dealer participation and activity connected to hurricanes Gustav and Ike may be considered by examining the percentage changes in the number of active dealers and volume and dockside value of crab purchases in the hurricane year of 2008 and 2009 relative to the values for 2007, the year before hurricanes Gustav and Ike. The comparison is complicated by a number of factors, including the possibility that dealer variables in 2007 were themselves affected by hurricanes Katrina and Rita in 2005.

The number of active crab dealers in the hurricane year of 2008 was essentially equivalent to the number active in the previous year (Table). The volume (Table) and dockside value (Table) of crabs purchased by crab dealers were each down less than two percent compared to 2007 levels. In 2009, the year after Gustav and Ike, the number of active dealers was 9.1 percent higher, volume was 18.2 percent higher, and dockside value was 6.6 percent higher than the corresponding 2007 measures.

## Chapter 3.
## Active Crab Dealers' Activities within Defined Crab Volume Categories

### 3.1. Delineation of Crab Volume Categories

There is considerable variation in the quantity of crabs purchased by active crab dealers in any given year. Most of the active crab dealer population purchases relatively volumes of crabs and a fairly small number of dealers buy a relatively large volume of crabs. To explore this issue, this report divides all active crab dealers into six "crab volume" categories defined by the quantity of crabs that dealers reported purchasing in a given year in the Louisiana trip ticket program:

(1) Less than 5,000 Pounds Category – All active crabs dealers that purchased 5,000 pounds or less in a particular calendar year

(2) 5,000 – 50,000 Pounds Category– All active crabs dealers that purchased between 5,000 pounds and 50,000 pounds in a particular year

(3) 50,000 – 100,000 Pounds Category - All active crab dealers that purchased between 50,000 pounds and 100,000 pounds in a particular year

(4) 100,000 – 500,000 Pounds Category - All active crab dealers that purchased between 100,000 pounds and 500,000 pounds in a particular year

(5) 500,000 – 1,000,000 Pounds Category- All active crab dealers that purchased between 500,000 pounds and one million pounds in a particular year

(6) More than 1,000,000 Pounds Category – All active crab dealers that purchased more than 1,000,000 pounds in a particular year

The remainder of this section explores the number of crab dealers within each crab volume category, the cumulative volume and nominal dockside value of crabs purchased by dealers within each category, and the average dockside price per pound that they paid for crabs.

### 3.2. Less than 5,000 Pounds Category

The number of crab dealers in the "less than 5,000 pounds" category comprised 41 to 49 percent of the total population of active crab dealers in any particular year within the study timeframe. The cumulative volume of crabs purchased by crab dealers in this category, however, was less than one-half of one percent of the total volume of crabs purchased by all active crab dealers between 2000 and 2009.

The number of active crab dealers in the “less than 5,000 pounds” category rose from 142 in 2001 to 211 in 2004 (Table 3.1). In the hurricane year of 2005, the number of dealers in this category declined to 175. After increasing to 181 in 2006, the number of crab dealers in this category declined to 155 in 2007, 152 in 2008, and 153 in 2009.

The cumulative volume (Table 3.2) and dockside value (Table 2.3) of crabs purchased by active crab dealers in the “less than 5,000 pounds” category reached study timeframe maxima of 282.2 thousand pounds and $550 thousands in 2004. Volume and dockside value fell to 247.1 thousand pounds and $337.8 thousand in the hurricane year of 2005. The cumulative volume and dockside value of dealers in this category fell over the next few years to 215.3 thousand pounds and $280.3 thousand dollars in the hurricane year of 2008 and 194.2 thousand pounds and $254.4 in 2009.

The average nominal dockside price per pound of crabs purchased by active crab dealers in the “less than 5,000 pounds” category was higher than the average nominal dockside price in any other crab volume category for every year within the study timeframe (Table 3.4). Average nominal dockside price rose from $1.33 per pound in 2000 to a period maximum of $1.77 in 2004, immediately before hurricanes Katrina and Rita. The average nominal dockside price fell to $1.37 in the hurricane year of 2005 and $1.27 per pound in 2006. Average price per pound rose to $1.72 in 2007 but declined to $1.30 in the hurricane year of 2008 and $1.31 in 2009.

**Table 3.1. Number of Active Crab Dealers in Crab Volume Categories: 2000 - 2009**

| | Less than 5,000 lb. | 5,000 – 50,000 lb. | 50,000 – 100,000 lb. | 100,000 – 500,000 lb. | 500,000 – 1,000,000 lb. | More than 1,000,000 lb. |
|---|---|---|---|---|---|---|
| **2000** | 177 | 135 | 22 | 44 | 18 | 13 |
| **2001** | 142 | 121 | 14 | 38 | 16 | 12 |
| **2002** | 168 | 124 | 16 | 37 | 17 | 17 |
| **2003** | 193 | 131 | 24 | 32 | 19 | 13 |
| **2004** | 211 | 137 | 26 | 33 | 12 | 16 |
| **2005** | 175 | 105 | 19 | 33 | 13 | 14 |
| **2006** | 181 | 119 | 20 | 28 | 18 | 19 |
| **2007** | 155 | 113 | 12 | 23 | 25 | 12 |
| **2008** | 152 | 108 | 16 | 32 | 23 | 10 |
| **2009** | 153 | 129 | 14 | 39 | 19 | 17 |

**Table 3.2. Cumulative Volume of Crabs Purchased by Active Crab Dealers in Crab Volume Categories: 2000 - 2009**

| | Less than 5,000 lb. | 5,000 – 50,000 lb. | 50,000 – 100,000 lb. | 100,000 – 500,000 lb. | 500,000 – 1,000,000 lb. | More than 1,000,000 lb. |
|---|---|---|---|---|---|---|
| | Thousands of Pounds | | | | | |
| **2000** | 208.9 | 2,552.5 | 1,563.8 | 10,193.6 | 12,569.3 | 24,967.1 |
| **2001** | 230.3 | 2,150.5 | 954.4 | 9,853.5 | 11,855.6 | 16,741.9 |
| **2002** | 259.3 | 2,149.4 | 1,157.9 | 8,643.9 | 13.104.2 | 15,210.3 |
| **2003** | 313.6 | 2,374.9 | 1,6942 | 7,753.5 | 15,210.3 | 24,771.7 |
| **2004** | 282.2 | 2,477.3 | 1,895.5 | 9,590.2 | 8,724.4 | 21,386.3 |
| **2005** | 247.1 | 1,856.2 | 1,247.9 | 8,209.7 | 8,899.3 | 17,592.1 |
| **2006** | 251.3 | 2.235.2 | 1,442.4 | 6,964.7 | 11,831.6 | 30,589.0 |
| **2007** | 218.3 | 2,055.0 | 870.3 | 4,911.4 | 18,356.0 | 18,464.3 |
| **2008** | 215.3 | 1,879.1 | 1,110.0 | 8,660.2 | 16,079.9 | 16,348.5 |
| **2009** | 194.2 | 2,400.4 | 1,034.6 | 10,122.9 | 12,946.3 | 26,228.4 |

**Table 3.3. Cumulative Nominal Dockside Value of Crabs Purchased by Active Crab Dealers in Crab Volume Categories: 2000 - 2009**

| | Less than 5,000 lb. | 5,000 – 50,000 lb. | 50,000 – 100,000 lb. | 100,000 – 500,000 lb. | 500,000 – 1,000,000 lb. | More than 1,000,000 lb. |
|---|---|---|---|---|---|---|
| | Thousands of Nominal Dollars | | | | | |
| **2000** | $277.1 | $2,570.0 | $1,110.5 | $6,368.2 | $8,462.0 | $15,726.9 |
| **2001** | $307.4 | $2,336.4 | $900.3 | $7,022.9 | $9,306.6 | $12,158.1 |
| **2002** | $315.1 | $2,204.1 | $927.2 | $5,136.1 | $7,987.9 | $14,083.3 |
| **2003** | $414.1 | $2,429.8 | $1,563.7 | $5,733.2 | $10,728.8 | $13,377.8 |
| **2004** | $500.2 | $2,599.8 | $1,630.0 | $5,104.5 | $6,585.6 | $12,891.8 |
| **2005** | $337.8 | $2,010.6 | $1,062.2 | $5,856.2 | $6,702.7 | $11,620.0 |
| **2006** | $319.8 | $2,160.7 | $1,286.5 | $4,476.0 | $6,792.7 | $17,188.4 |
| **2007** | $374.8 | $2,220.3 | $878.9 | $3,629.1 | $14,321.4 | $13,446.8 |
| **2008** | $280.3 | $2,076.9 | $1,219.1 | $6,516.4 | $12,278.8 | $11,947.6 |
| **2009** | $254.4 | $2,598.3 | $814.2 | $7,144.4 | $9,143.3 | $17,210.0 |

**Table 3.4. Average Nominal Dockside Price per Pound of Crabs Purchased by Active Crab Dealers in Crab Volume Categories: 2000 - 2009**

| | Less than 5,000 lb. | 5,000 – 50,000 lb. | 50,000 – 100,000 lb. | 100,000 – 500,000 lb. | 500,000 – 1,000,000 lb. | More than 1,000,000 lb. |
|---|---|---|---|---|---|---|
| **2000** | $1.33 | $1.02 | $0.71 | $0.62 | $0.67 | $0.63 |
| **2001** | $1.33 | $1.09 | $0.94 | $0.71 | $0.78 | $0.73 |
| **2002** | $1.22 | $1.03 | $0.80 | $0.59 | $0.61 | $0.57 |
| **2003** | $1.32 | $1.03 | $0.92 | $0.66 | $0.71 | $0.65 |
| **2004** | $1.77 | $1.05 | $0.86 | $0.60 | $0.75 | $0.60 |
| **2005** | $1.37 | $1.08 | $0.85 | $0.71 | $0.75 | $0.66 |
| **2006** | $1.27 | $0.97 | $0.89 | $0.64 | $0.57 | $0.56 |
| **2007** | $1.72 | $1.08 | $1.01 | $0.74 | $0.78 | $0.73 |
| **2008** | $1.30 | $1.11 | $1.11 | $0.75 | $0.76 | $0.73 |
| **2009** | $1.31 | $1.08 | $0.79 | $0.71 | $0.73 | $0.66 |

### 3.3. 5,000 to 50,000 Pounds Category

Within the study timeframe, about 29 percent to 35 percent of the active crab dealers per year were in the "5,000 to 50,000 pounds" category. The total volume of crabs purchased by crab dealers in this volume category represented about 4.3 percent of the total volume of crabs purchased by all crab dealers from 2000 to 2009. (The appendix includes a more detailed analysis of the dealers in this volume category that divides it into three separate sub-categories: 5,000 to 10,000 pounds, 10,000 to 20,000 pounds, and 20,000 to 50,000 pounds.)

The cumulative volume of crabs purchased by dealers in the "5,000-50,000 pounds" volume category decreased from 2.55 million pounds in 2000 to 2.15 million pounds in 2001 and 2002 (Table 3.3). Volume rose to 2.48 million pounds in 2004, the year before hurricanes Katrina and Rita. In the hurricane of 2005, the volume of crabs purchased by dealers in this category fell to 1.86 million pounds. The volume of crabs was 2.24 million pounds in 2006 and 2.06 million pounds in 2007, the year before hurricanes Gustav and Ike. Volume dropped to 1.88 million pounds in the hurricane year of 2008. Cumulative volume among dealers in this category rose to 2.40 million pounds in 2009.

The dockside value of crabs purchased by dealers in this category stood at $2.60 million in 2004 and fell to $2.01 million in the hurricane year of 2005 (Table 3.4). Cumulative dockside value rose to $2.16 million in 2006 and $2.22 million in 2007 but fell to $2.08 million in the hurricane year of 2008.

The average dockside price per pound paid for crabs by dealers in this crab volume category varied between $1.02 per pound and $1.11 per pound for most of the study timeframe (Table 3.4). In one year, 2006, average nominal dockside price per pound was $0.97 per pound.

### 3.4. 50,000 to 100,000 Pounds Category

The number of dealers in the “50,000 – 500,000 pounds” crab volume category constituted 3.5 percent to 6.0 percent of the total population of active crab dealers in any particular year during the study timeframe. The total volume of crabs purchased by dealers in this category was 6.1 percent of the total volume of all crabs purchased by all dealers between 2000 and 2009.

The number of dealers in the “50,000 – 500,000 pounds” volume category (Table 3.1) was 26 in 2004, 19 in the hurricane year of 2005, and 20 in 2006. The count of crab dealers in this category ranged between 12 and 16 for the remainder of the study timeframe.

The cumulative volume (Table 3.2) and dockside value (Table 3.3) of crabs purchased by crab dealers in this category were 1.90 million pounds and $1.63 million in 2004. In the hurricane year of 2005, volume fell by 34.2 percent to 1.25 million pounds and dockside value fell by 34.2 percent to $1.06 million. Volume and dockside value in 2006 (1.44 million pounds and $1.29 million) were somewhat higher than their 2005 values. In 2007, volume declined to a study timeframe minimum of 870 thousand pounds and dockside value dropped to $878 thousand. Volume in the hurricane year of 2008 was 1.11 million pounds and dockside value was $1.22 million. Both values fell in the following year to 1.03 million pounds and $814 thousand (a period minimum).

Average nominal dockside price per pound of crabs bought by crab dealers in the "50,000 – 100,000 pounds" category generally ranged between $0.71 per pound and $0.92 per pound (Table 2.3.4). In two post-hurricane Katrina years, the price per pound rose above one dollar: $1.01 in 2007 and $1.11 in 2008.

### 3.5. 100,000 to 500,000 Pounds Category

The number of active dealers in the "100,000 – 500,000 pounds" crab volume category comprised 6.8 percent to 11.1 percent of the population of all active crab dealers in any particular year during the study timeframe. The total volume of carbs purchased by dealers in this crab volume category was 18.3 percent of the volume of crabs purchased by all crab dealers between 2000 and 2009.

The number of active crab dealers in this crab volume category fell from 22 in 2000 to 33 in 2004 and remained 33 in the hurricane year of 2005 (Table 3.1). The number dropped to 28 in 2006 and 23 in 2007. The number rose to 32 in the hurricane year of 2008 and 39 in 2009.

The cumulative volume of crabs purchased by dealers in the "100,000 – 500,000 pounds" category (Table 3.2) fell from 9.59 million pounds in 2004 to 8.21 million pounds in the hurricane year of 2005 and then declined further to 6.96 million pounds in 2006 and 4.91 million pounds in 2007. Cumulative dockside value ($5.10 million in 2004) rose to $5.86 million in the hurricane year of 2005 (even as volume declined) but then declined over the next two years to $4.48 million in 2006 and $3.63 in 2007 (Table 3.3). Volume and dockside value rose from their 2007 values to 8.66 million pounds and $6.52 million in the hurricane year of 2008 and then to 10.12 million pounds and $7.14 million in 2009.

Average dockside price per pound paid by dealers in the "100,000 – 500,000 pounds" category varied between $0.59 per pound and $0.75 per pound during the study timeframe (Table 3.4).

### 3.6. 500,000 to 1,000,000 Pounds Category

The dealers in the "500,000 – 1,000,000 pounds" carb volume category represented 2.8 percent to 7.4 percent of the total population of active crab dealers in any particular year during the study timeframe.

Their total purchases represented 25.1 percent of the total volume of crabs purchased by all active crab dealers between 2000 and 2009.

The number of dealers in this category was generally low (Table 3.1). There were fewer than 20 dealers in this crab volume category prior to 2007, 25 in 2007, 23 in the hurricane year of 2008, and 19 in 2009.

The cumulative volume of crabs purchased by dealers in the “500,000 – 1,000,000 pounds” category was 15.2 million pounds in 2003 and 8.72 million in 2004 (Table.3.2). The volume was slightly higher, 8.90 million pounds, in the hurricane year of 2005. Cumulative volume rose to 11.83 million pounds in 2006 and 18.36 million pounds in 2007. Volume in this category fell to 16.08 million pounds in the hurricane year of 2008 and to 12.95 million pounds in 2009.

Cumulative dockside value among dealers in the “500,000 – 1,000,000 pounds” category followed a pattern similar to that for cumulative volume, down from $10.73 million in 2003 to $6.59 million in 2004 and $6.70 million in the hurricane year of 2005 (Table 3.3). Dockside value rose to $14.32 million in 2007 and then declined to $12.28 million in the hurricane year of 2008 and $9.14 million in 2009.

Average nominal dockside per pound paid b crab dealers in the “500,000-1,000,000 pounds” category (Table 3.4) ranged between $0.71 per pound and $0.75 per pound for most of the period, except for 2000 ($0.67 per pound), 2002 ($0.61 per pound), and 2006 ($0.57 per pound).

### 3.7. More than 1,000,000 Pounds Category

The dealers in this crab volume category represented between 2.9 percent and 4.9 percent of the total active crab dealer population in any particular year during the study timeframe. The number of dealers ranged between 12 and 17 in the years prior to hurricanes Katrina and Rita. The count stood at 14 in the hurricane year of 2005 and 19 in 2006. The number of crab dealers purchasing 1,000,000 pounds or more declined to 12 in 2007 and ten in the hurricane year of 2008. In 2009, there were 19 dealers in this category.

The cumulative volume of purchases made by dealers in this volume category accounted for 45.7 percent of the total volume of crabs purchased by all crab dealers between 2000 and 2009. The volume (Table 3.2) and dockside value (Table 3.3) of crabs purchased by crab dealers in the “more than 1,000,000 pounds” category were 21.38 million pounds and $12.89 million in 2004. Volume fell by 17.7 percent to 17.59 million pounds and dockside value fell by 9.9 percent to $11.62 million in the hurricane year of 2005. The cumulative volume in this category jumped by 73.9 percent to 30.59 million pounds in 2006 and dockside value rose by 47.9 percent to $1778 million. Volume and dockside value both declined over the following two years to reach 16.35 million pounds and $11.95 in the hurricane year of 2008. After hurricanes Gustav and Ike, volume rose to 26.23 million pounds and dockside value rose to $17.21 million.

The average dockside price per pound of crabs purchased by dealers in the “more than 1,000,000 pounds” category (Table 3.4) was lower than the dockside price paid by dealers in any other crab volume category. Average nominal dockside price per pound ranged between $0.56 per pound and $0.65 per pound between 2002 and 2005. Price per pound rose to $0.73 per pound in 2007 and 2008 and $0.66 per pound in 2009.

As previously stated, a relatively small number of dealers purchased a relatively large percentage of the volume of crabs purchased by all commercial seafood dealers in any particular year. For example, in 2009 the 17 largest dealers (that is, the number of dealers in the “more than 1,000,000 pounds” volume category) accounted for onl7 4.6 percent of the population of active crab dealers but purchased 49.6 percent of the volume of crabs purchased by all crab dealers that year. Across the 2000 – 2009 study timeframe, dealers in the “more than 1,000,000 pounds” category constituted 2.9 percent to 4.9 percent of the active crab dealers in a given year and accounted for 36.8 percent to 49.6 percent of the volume of crabs purchased from commercial fishermen by dealers in Louisiana.

The combined number of active dealers in the "500,000 – 1,000,000 pounds" and "more than 1,000,000 pounds" category ran from a low of 27 in 2005 to a high of 37 in 2006 and 2007. At the same time, the cumulative volume of crabs purchased by dealers who bought 500,000 pounds of crabs or more represented 69.6 percent of the total volume of crabs in 2005, 83.0percent of the total volume in 2007, and 82.1 percent of the total volume in 2008.

### 3.8 Percentage Changes in Active Dealer Numbers, Volume, and Dockside Value in Selected Crab Volume Categories

To gain an appreciation of changes in crab dealer activity following hurricanes Katrina and Rita and hurricanes Gustav and Ike among dealers of different sizes, this section examines changes in the volume and dockside value among dealers in the three largest crab volume categories: dealers in the "100,000 – 500,000 pounds" category, the "500,000-1,000,000 pounds" category, and the "more than 1,000,000 pounds" category. The percentage changes in the number of dealers are not presented because the number of dealers was relatively small. As a result, relatively modest changes in the absolute number of dealers could produce relatively large percentage changes in the number of active dealers.

Other crab volume categories are excluded because they account for relatively small portions of total dealer purchases. Changes observed among these categories may not be representative of the broader crab dealer sector.

#### 3.8.1. Percentage Changes in Volume and Dockside Value among Select Volume Categories Following Hurricanes Katrina and Rita

Following hurricanes Katrina and Rita, the volume of crabs purchased by dealers in the "100,000 – 500,000 pound" crab volume category in three consecutive years were down relative to 2004 levels. The volume in the hurricane year was 14.4 below the volume of 2004 (Table 3.5). Volume declined even further in the following two years. The volume purchased by dealers this volume category in 2006 was 27.4 and the volume in 2007 was nearly fifty percent below 2004 levels. The dockside value of crabs

**Table 3.5. Change in the Volume of Crabs Purchased by Active Crab Dealers in the 100,000-500,000 Pound Crab Volume Category in Specified Year as a Percentage of Volume in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| **Base Years** | 2000-2004 Average | +4.2% | **-10.8%** | **-24.4%** | **-46.7%** | -5.9% | +9.9% |
| | 2004 | | **-14.4%** | **-27.4%** | **-48.8%** | -9.7% | +5.6% |
| | 2005 | | | -15.2% | -40.2% | +5.5% | +23.3% |
| | 2006 | | | | -29.5% | +24.3% | +45.3% |
| | 2007 | | | | | **+76.3%** | **+106.1%** |
| | 2008 | | | | | | **+16.9%** |

**Table 3.6. Change in the Dockside Value of Crabs Purchased by Active Crab Dealers in the 100,000-500,000 Pound Crab Volume Category in Specified Year as a Percentage of Dockside Value in Various Base Years**

| | | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** |
|---|---|---|---|---|---|---|---|
| **Base Years** | 2000-2004 Average | -2.4% | **-0.3%** | **-23.8%** | **-38.2%** | 11.0% | 21.6% |
| | 2004 | | **2.1%** | **-21.9%** | **-36.7%** | 13.7% | 24.6% |
| | 2005 | | | -23.6% | -38.0% | 11.3% | 22.0% |
| | 2006 | | | | -18.9% | 45.6% | 59.6% |
| | 2007 | | | | | **79.6%** | **96.9%** |
| | 2008 | | | | | | **9.6%** |

The pattern of change in volume among dealers in the “500,000-1,000,000 pound” category was different from that observed among those in the “100,000-500,000 pound” category. The volume (Table 3.7) and dockside value (Table 3.8) for crab dealers in the “500,000 - 1,000,000 pound” category in the hurricane year of 2005 were slightly higher than the measures for 2004. The volume purchased by dealers in this category in 2006 was 35.6 percent higher and the volume in 2007 was 109.3 percent higher than the volume for 2004.

The volume (Table 3.9) and dockside value (Table 3.10) purchased by dealers in the “more than 1,000,000 million pound” category in the hurricane year of 2005 were down by 17.7 percent and 9.9 percent, respectively, compared to their 2004 measures. In the following year, volume among crab dealers in this category was 43.0 percent and 33.3 percent higher than 2004 levels. In 2007, however, both measures decreased. Volume in 2007 was 13.7 percent less than 2004 volume while dockside value was 4.3 percent above 2004 dockside value.

**Table 3.7. Change in the Volume Crabs Purchased by Active Crab Dealers in the 500,000-1,000,000 Pound Crab Volume Category in Specified Year as a Percentage of Volume in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | -29.0% | **-27.6%** | **-3.8%** | **48.5%** | 30.8% | 5.3% |
| | 2004 | | **2.0%** | **35.6%** | **109.3%** | 84.3% | 48.4% |
| | 2005 | | | 32.9% | 105.1% | 80.7% | 45.5% |
| | 2006 | | | | 54.3% | 35.9% | 9.4% |
| | 2007 | | | | | **-11.9%** | **-29.1%** |
| | 2008 | | | | | | **-19.5%** |

**Table 3.8. Change in the Dockside Value of Crabs Purchased by Active Crab Dealers in the 500,000-1,000,000 Pound Volume Category in Specified Year as a Percentage of Dockside Value in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | -23.5% | **-22.2%** | **-21.1%** | **66.3%** | 42.5% | 6.1% |
| | 2004 | | **1.8%** | **3.1%** | **117.5%** | 86.5% | 38.8% |
| | 2005 | | | 1.3% | 113.7% | 83.2% | 36.4% |
| | 2006 | | | | 110.8% | 80.8% | 34.6% |
| | 2007 | | | | | **-14.3%** | **-36.2%** |
| | 2008 | | | | | | **-25.5%** |

**Table 3.9. Change in the Volume of Crabs Purchased by Active Crab Dealers in the More than 1,000,000 Pound Crab Volume Category in Specified Year as a Percentage of Volume in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | -1.5% | **-19.0%** | **40.9%** | **-15.0%** | -24.7% | 20.8% |
| | 2004 | | **-17.7%** | **43.0%** | **-13.7%** | -23.6% | 22.6% |
| | 2005 | | | 73.9% | 5.0% | -7.1% | 49.1% |
| | 2006 | | | | -39.6% | -46.6% | -14.3% |
| | 2007 | | | | | **-11.5%** | **42.0%** |
| | 2008 | | | | | | **60.4%** |

**Table 3.10. Change in the Dockside Value of Crabs Purchased by Active Crab Dealers in the More than 1,000,000 Pound Volume Category in Specified Year as a Percentage of Dockside Value in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | -5.5% | **-14.9%** | **25.9%** | **-1.5%** | -12.5% | 26.1% |
| | 2004 | | **-9.9%** | **33.3%** | **4.3%** | -7.3% | 33.5% |
| | 2005 | | | 47.9% | 15.7% | 2.8% | 48.1% |
| | 2006 | | | | -21.8% | -30.5% | 0.1% |
| | 2007 | | | | | **-11.1%** | **28.0%** |
| | 2008 | | | | | | **44.0%** |

### 3.8.2. Percentage Changes in Volume and Dockside Value among Select Volume Categories Following Hurricanes Katrina and Rita

In 2008, the year of hurricanes Gustav and Ike, the volume (Table 3.5) and dockside value (Table 3.6) of crabs purchased by dealers in the “100,000 – 500,000 pounds” category increased by 76.3 percent and 79.6 percent compared to 2007 values. Volume and dockside value in 2009 were each more than twice as large as those in 2007.

Following hurricanes Gustav and Ike, the volume (Table 3.7) and dockside value (Table 3.8) purchased by dealers in the “500,000 – 1,000,000 pound” crab dealer category were down 11.9 percent and 14.3 percent compared to the 2007 measures. Both measures were down in 2009 as well.

Following hurricanes Gustav and Ike, the volume (Table 3.9) and dockside value (Table 3.10) of crabs purchased by crab dealers in the “more than 1,000,000 million pound” category in the hurricane year of 2008 were 11 to 12 percent below the corresponding measures for 2007. Volume among dealers in “more than 1,000,000 pound category” was up 42.0 percent and dockside value was up 28.0 percent relative to 2007 measures.

## Chapter 4.
## Active Crab Dealers' Purchases of Stone Crabs and Blue Crabs

### 4.1. Introduction

There are two species of crabs harvested commercially in Louisiana: blue crabs and stone crabs. The principal species of crabs (blue crabs) comprise more than 99 percent of the purchases in Louisiana crab fisheries. This section will begin by examining trip ticket data pertaining to stone crabs. It will conclude by a more thorough investigation of the data pertaining to blue crabs.

### 4.2 Activity of Active Crab Dealers Purchasing Stone Crabs

Stone crabs (or more specifically, stone crab claws, the only part of the crustacean that is typically landed) comprise a relatively minor portion of the Louisiana commercial crab fishery. The total volume of all stone crabs purchased between 2000 and 2009 accounted about 0.02 percent of the volume of all crabs purchased by active crab dealers during the period. The total dockside value of stone crabs represented only 0.06 percent of the total dockside value of all crabs purchased by crab dealers during the study timeframe.

The number of active stone crab dealers (that is, commercial seafood dealers that reported purchasing at least one pound of stone crabs directly from commercial fishermen in any particular year) has been fairly low throughout the study timeframe (Figure 4.1). The number of active stone crab dealers declined from a period high of 31 in 2001 to 29 in 2002, 18 in 2003, and 21 in 2004. The number of active stone crab dealers fell to nine in the hurricane year of 2005 and seven in 2006. The number rose to 16 in 2007 and 14 in 2008. The number of dealers reporting purchases of stone crabs returned to seven in 2009. (In comparison, the number of dealers buying blue crabs was 340 or more in every year between 2000 and 2009.)

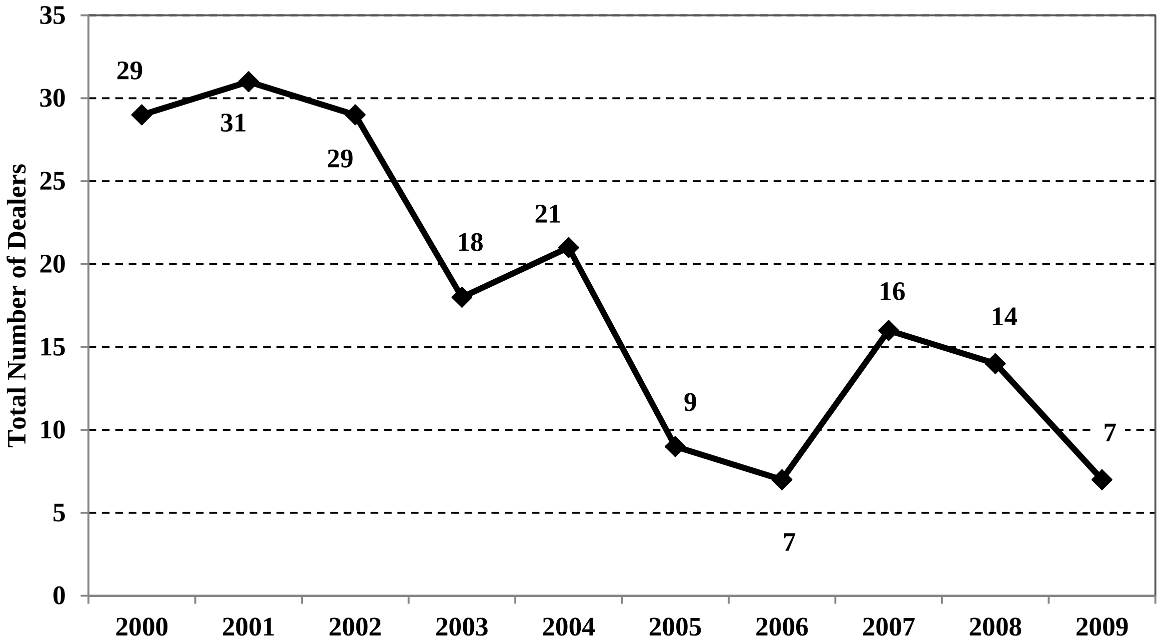


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**Figure 4.1. Number of Active Stone Crab Dealers, By Year: 2000-2009**

The cumulative volume of stone crabs purchased by dealers fell from 50.0 thousand pounds in 2000 to 8.0 thousand pounds in 2002, 12.3 thousand pounds in 2003, and only 1.6 thousand pounds in 2004 (Figure 4.2). The volume of stone crabs fell to approximately 600 pounds in the hurricane year of 2005. The volume of stone crabs varied between 1.6 thousand pounds and 4.2 thousand pounds in the years after hurricanes Katrina and Rita.

The cumulative dockside value of stone crabs purchased by active crab dealers fell from $112.1 thousand in 2000 to $16.8 thousand in 2002 and $43.0 thousand in 2003 and $3.8 thousand in 2004 (Figure 4.2). Dockside value of blue crabs was $$1.7 thousand in the hurricane year of 2005 and varied between $4.6 thousand and $11.4 thousand in the years thereafter.

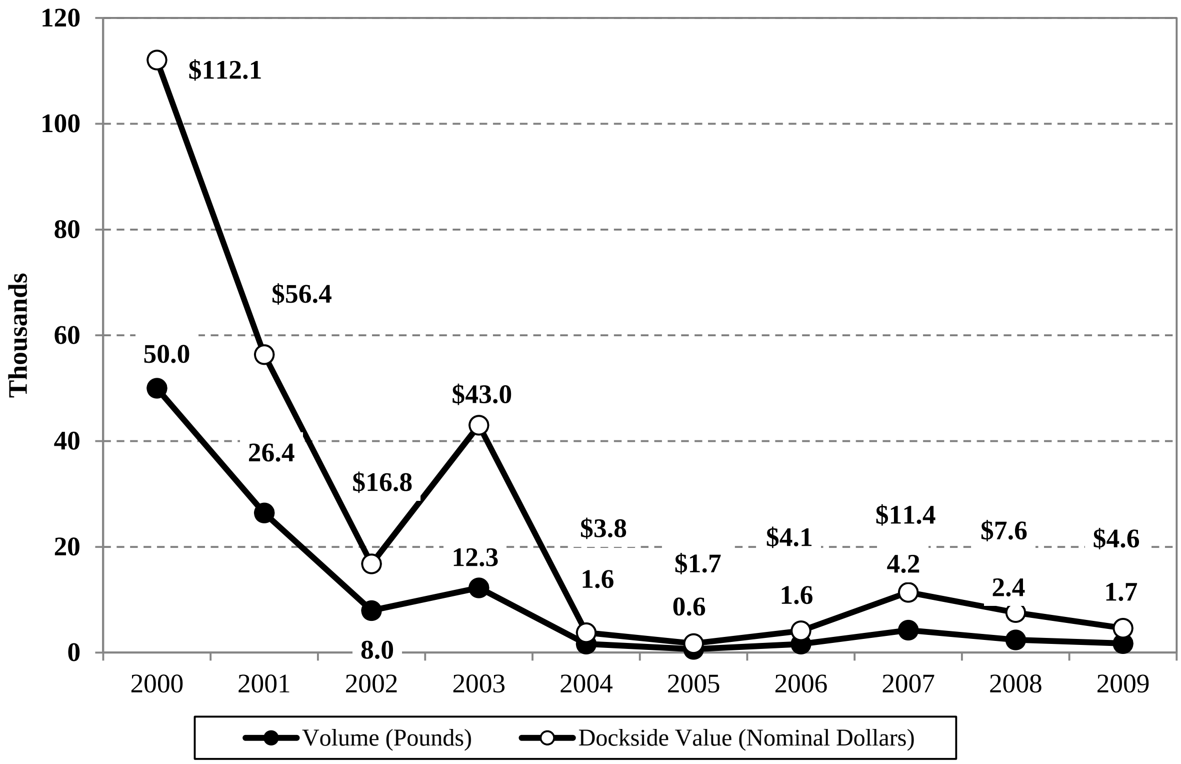


**Figure 4.2. Cumulative Volume and Dockside Value of Stone Crabs Purchased by Louisiana Seafood Dealers Reported in Louisiana Trip Ticket Program, By Year: 2000-2009**

The average nominal price per pound of stone crab paid by dealers ranged between $2.24 and $2.11 between 2000 and 2002 (Figure 4.3). The average nominal price per pound rose to $3.51 in 2003 and fell to $2.31 in 2004. Average nominal price per pound of stone crab was $2.73 per pound in the hurricane year of 2005. The average dockside price per pound climbed to $3.13 per pound in the hurricane year of 2008 and declined to $2.70 in 2009. (The per pound price of blue crabs, in contrast, ranged was less than $0.80 per pound throughout the study timeframe.)

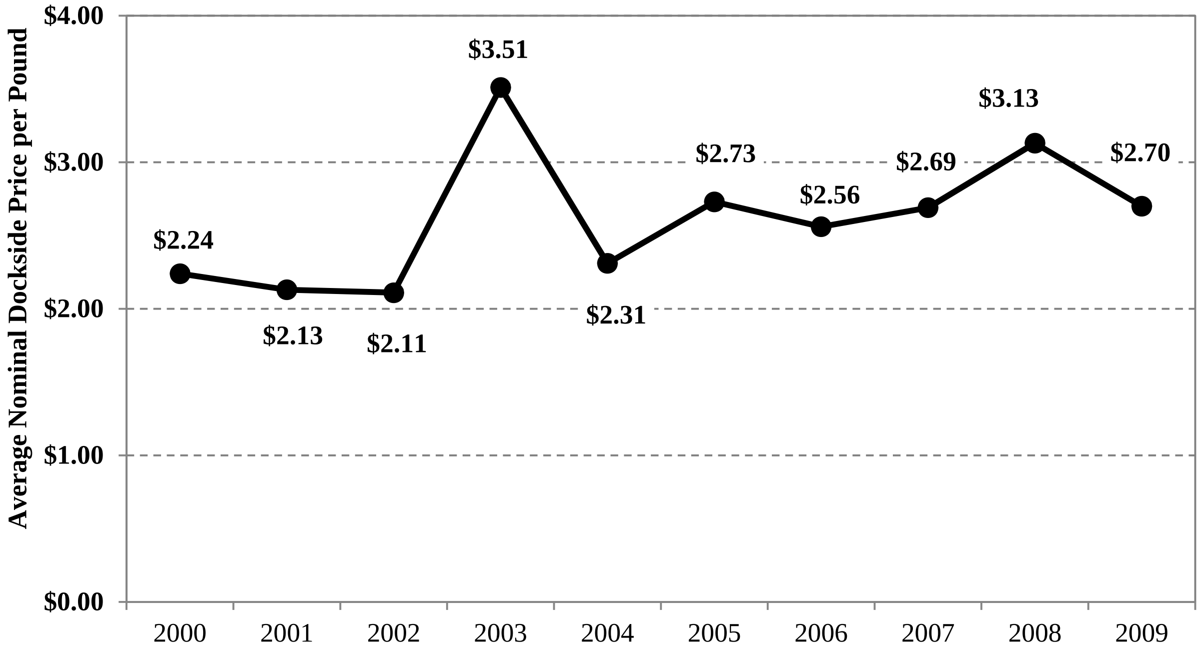


**Figure 4.3. Average Nominal Price per Pound for Stone Crabs Purchased by Seafood Dealers in Louisiana According to the Louisiana Trip Ticket Program, By Year: 2000-2009**

## 4.3. Activity of Active Crab Dealers Purchasing Blue Crabs

The number of active blue crab dealers (or licensed commercial seafood dealers that purchased at least one pound of blue crabs directly from commercial fishermen) was 407 in 2000 and 340 in 2001 (Figure 4.4). The number of dealers rose to a period maximum of 433 in 2004 and then fell to 359 in the hurricane year of 2005. The count rose to 385 in 2006 but declined to 340 in 2007 and 341 in the hurricane year of 2008. In the year following hurricanes Gustav and Ike, there were 370 dealers that bought blue crabs in Louisiana.

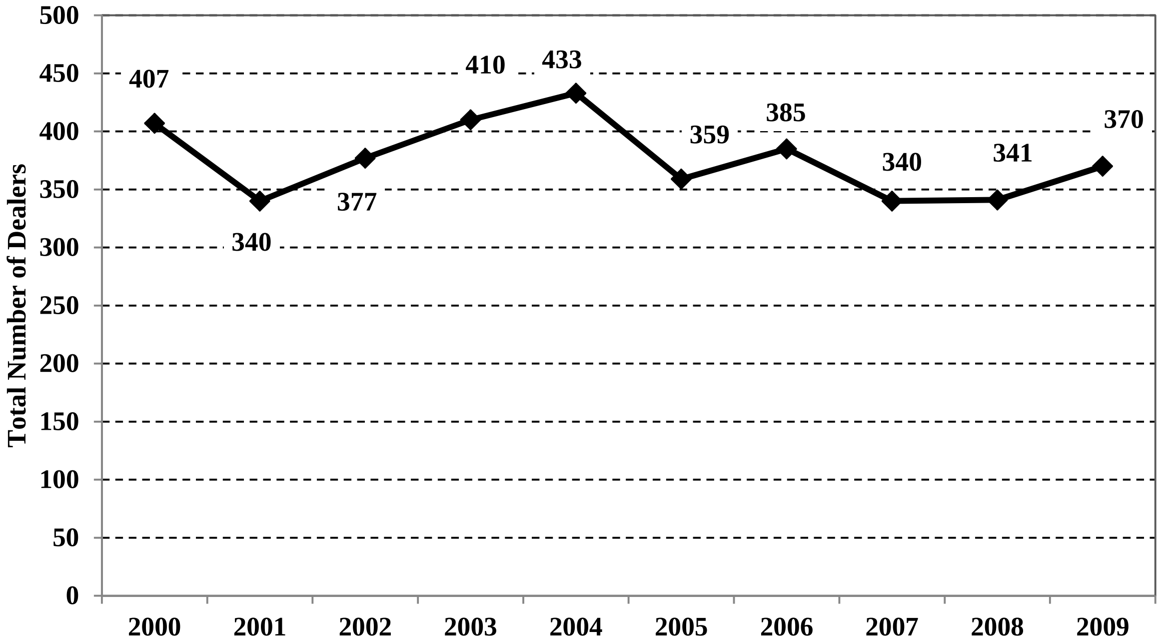


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**Figure 4.4. Number of Active Blue Crab Dealers, By Year: 2000-2009**

The cumulative volume of blue crabs purchased by dealers from commercial fishermen was 52.0 million pounds in 2000, 41.8 million pounds in 2001, and 50.1 million pounds in 2002 (Figure 4.4). Volume declined over the next few years to 44.4 million pounds in 2004, the year before hurricanes Katrina and Rita. Volume fell to 38.1 million pounds in the hurricane year of 2005 and subsequently jumped to a period maximum of 53.3 million pounds in the following year. Volume fell to 44.8 million pounds in 2007 and 44.3 million pounds in the hurricane year of 2008. In 2009, volume rose to 52.9 million pounds.

Cumulative dockside value of blue crabs purchased by dealers in Louisiana fell from $34.4 million in 2000 to $30.6 million in 2002 (Figure 4.4). The dockside value increased to $33.6 million in 2003 but declined to $27.6 million in the hurricane year of 2005. Dockside value then rose to $34.9 million in 2007 and $34.3 million in the hurricane year of 2008 and $37.2 million in 2009. The average dockside price per pound paid for blue crabs by seafood dealers ranged between $0.61 and $0.78 per pound from 2000 to 2009 (Figure 4.5).

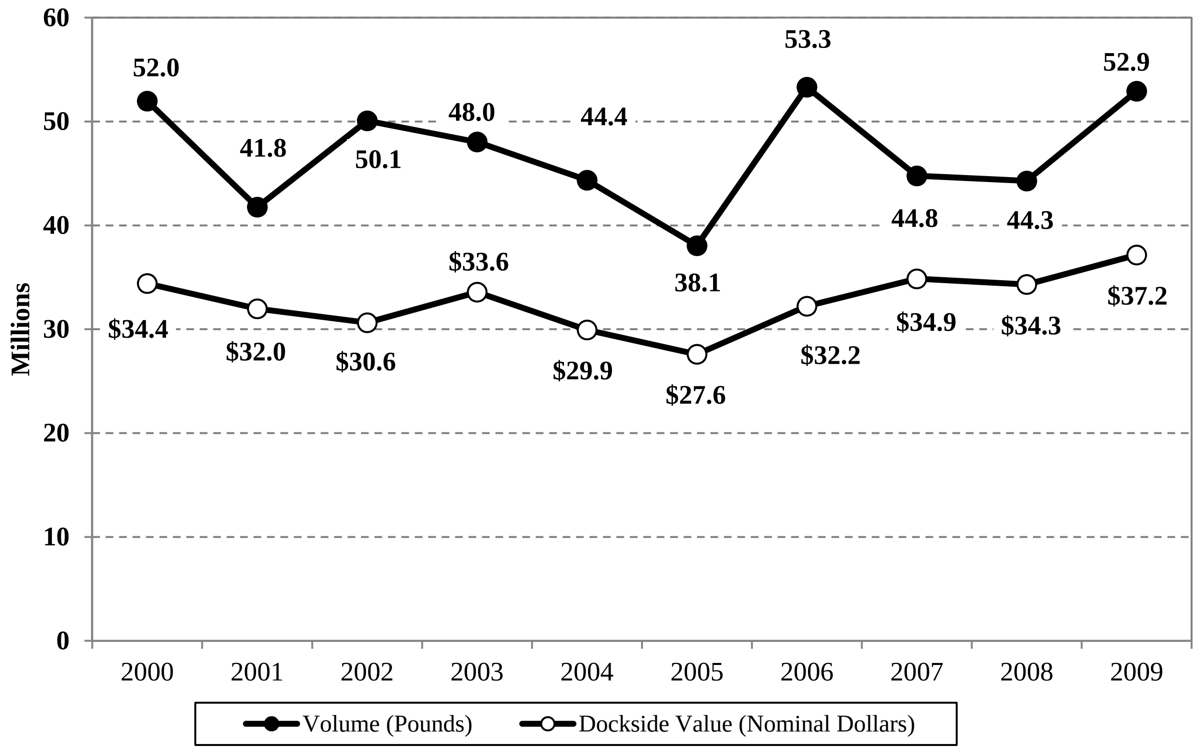


**Figure 4.5.** **Cumulative Volume and Dockside Value of Blue Crabs Purchased by Louisiana Seafood Dealers Reported in Louisiana Trip Ticket Program, By Year: 2000-2009**

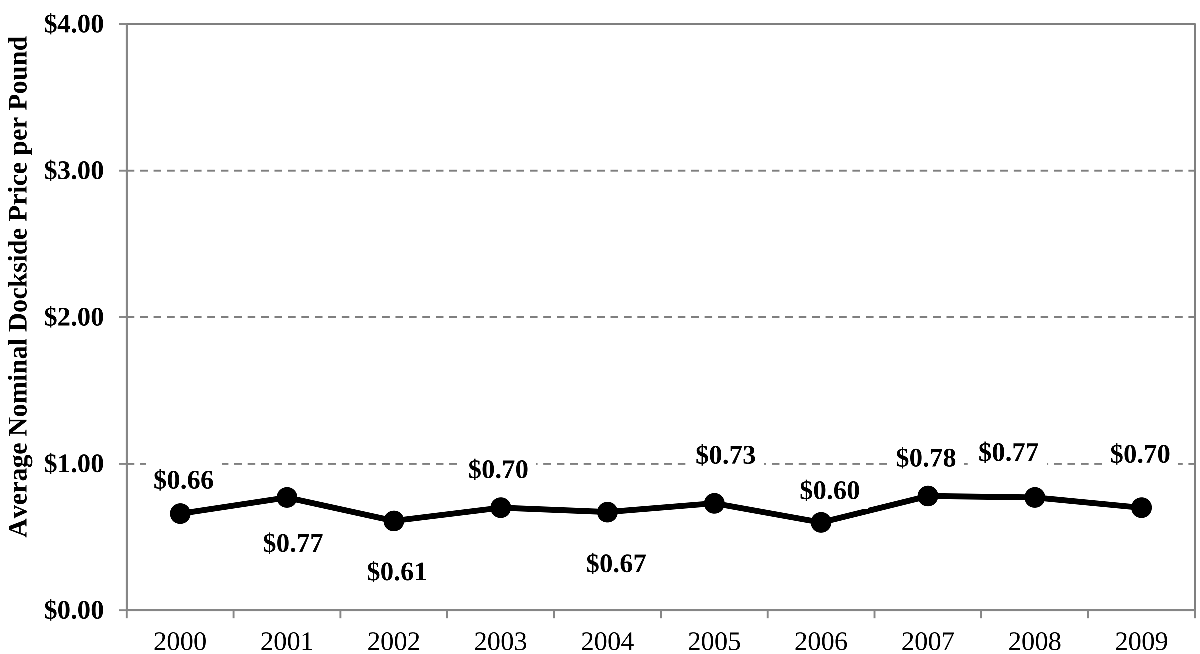


**Figure 4.6.** **Average Dockside Price per Pound for Blue Crabs Purchased by Seafood Dealers in Louisiana According to the Louisiana Trip Ticket Program, By Year: 2000-2009**

### 4.4. Active Blue Crab Dealers by License Type

This section examines the participation and activity of active blue crab dealers in Louisiana within different license type categories (Table 4.1.): resident business dealers, resident vehicle dealers, and resident fresh products dealers. This report does not contain an analysis of activity by those with other types of commercial dealer licenses because in many years there were not enough subjects within those license categories (at least five) to facilitate detailed analysis while maintaining confidentiality.

#### 4.4.1. Active Resident Business Blue Crab Dealers

Active resident business blue crab dealers were the most numerous of the different types of active blue crab dealers (Figure 4.7). Their numbers rose from 265 in 2000 and 252 in 2001 to 300 in 2004, the year before hurricanes Katrina and Rita. The number of active resident business blue crab dealers to 254 in the hurricane year of 2005 to 233 in 2007, 230 in 2008, and 223 in 2009 (the year after hurricanes Gustav and Ike).

Active resident business blue crab dealers collectively purchased 91.5 percent of the volume of blue crabs purchased by all blue crab dealers between 2000 and 2009. The cumulative volume of blue crabs purchased by resident business dealers (Figure 5.8) was 48.5 million pounds in 2000 and 46.2 million in 2002. Blue crab volume declined over the next few years to 41.3 million pounds in 2004 and to 35.0 million pounds in the hurricane year of 2005. After hurricanes Katrina and Rita, the volume of crabs purchased by active resident business blue crab dealers rose to 47.4 million pounds in 2006 but returned to 40.5 million pounds in 2007 and 2008. In 2009, the year after hurricanes Gustav and Ike, volume rose to 47.7 million pounds.

The cumulative dockside value of blue crabs purchased from commercial fishermen by resident business blue crab dealers in Louisiana (Figure 5.8) fell from $31.6 million in 2000 to $27.1 million in 2004 and then to $25.2 million in 2005, the year of hurricanes Katrina and Rita. After the hurricanes, dockside value rose to $28.0 million in 2006, $31.2 million in 2007, and $33.0 million in 2009.

**Table 4.1. Definition of Various Types of Active Blue Crab Dealers**

| | |
|---|---|
| Active Resident Business Blue Crab Dealer | An individual or business that held a resident wholesale/retail dealer – business license and reported buying at least one pound of blue crabs directly from a commercial fishermen on trip ticket reports in a particular year |
| Active Resident Vehicle Blue Crab Dealer | An individual or business that held a resident wholesale/retail dealer – business license and reported buying at least one pound of blue crabs directly from a commercial fishermen on trip ticket reports in a particular year |
| Active Resident Fresh Products Blue Crab Dealer | An individual or business that held a resident fresh products license and reported at least one pound of blue crabs on trip ticket reports in a particular year |

Volume per active resident business blue crab dealer was calculated by dividing the volume of blue crab purchased by resident business blue crab dealers for a particular year by the corresponding number of active resident business blue crab dealers. Volume per active resident business blue crab dealer declined from 174 thousand pounds per dealer in 2002 to 138 thousand pounds per dealer in 2004 (Figure 4.8). The volume per active resident business dealer remained 138 thousand pounds per dealer in the hurricane year of 2005 and spiked to 204 thousand pounds per dealer in 2006. Volume per dealer declined over the following three year but remained above the estimates for volume per resident business crab dealer that were seen before hurricanes Katrina and Rita.

Dockside value per active resident business blue crab dealer was estimated by dividing the cumulative dockside value of blue crabs by the corresponding number of active resident business blue crab dealers. The dockside value per resident vehicle blue crab dealers (Figure 4.8) declined from $119 thousand dollars per dealer in 2000 to $106 thousand per dealer in 2004. Dockside value per dealer fell to a period low of $90 thousand per dealer in the hurricane year of 2005 but continued to rise for the rest of the study timeframe to a period maximum of $148 thousand per dealer in 2009, the year after hurricanes Gustav and Ike.

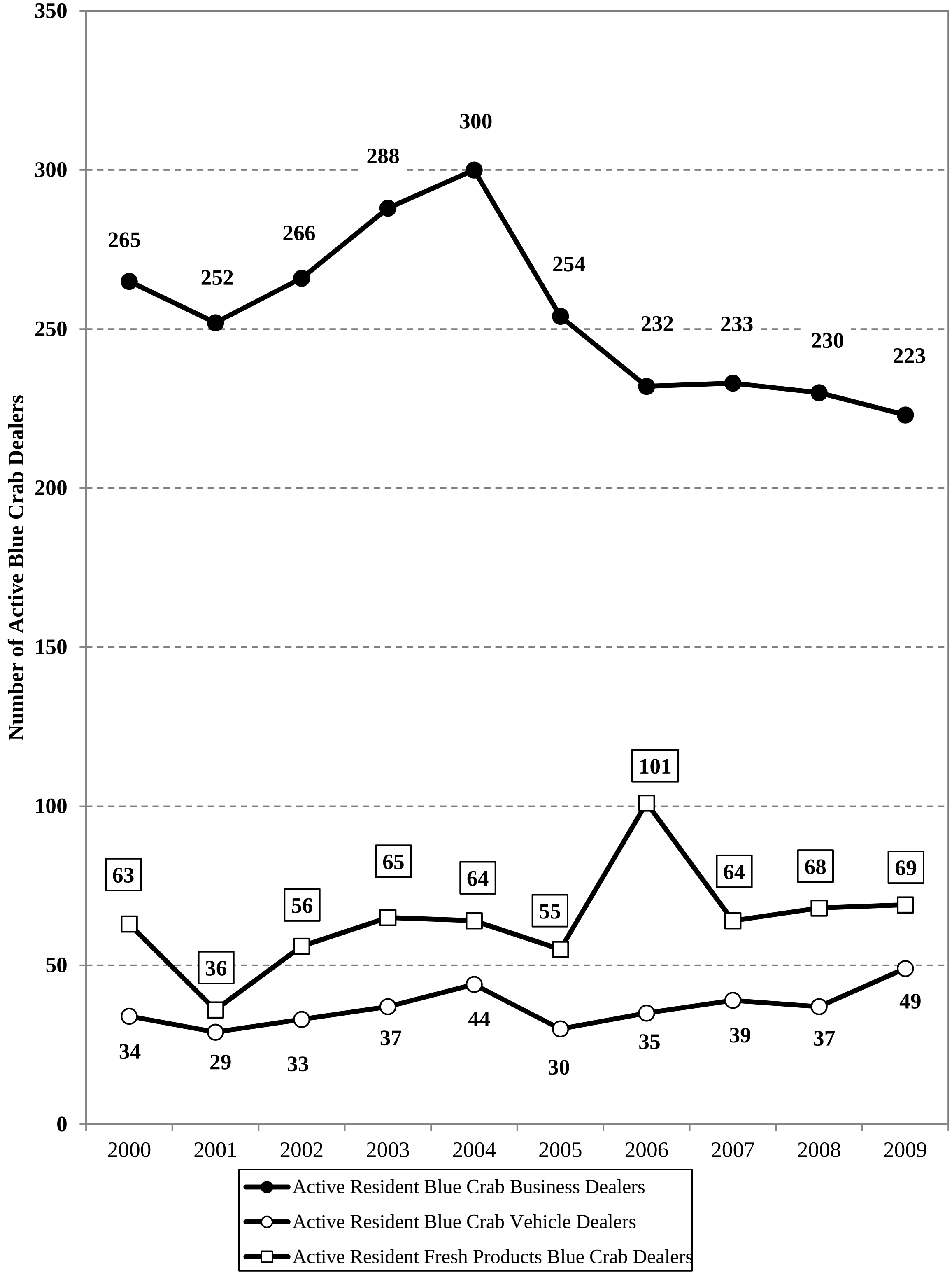


**Figure 4.7.** **Number of Active Resident Blue Crab Dealers by Seafood Dealer License Type, By Year: 2000-2009**

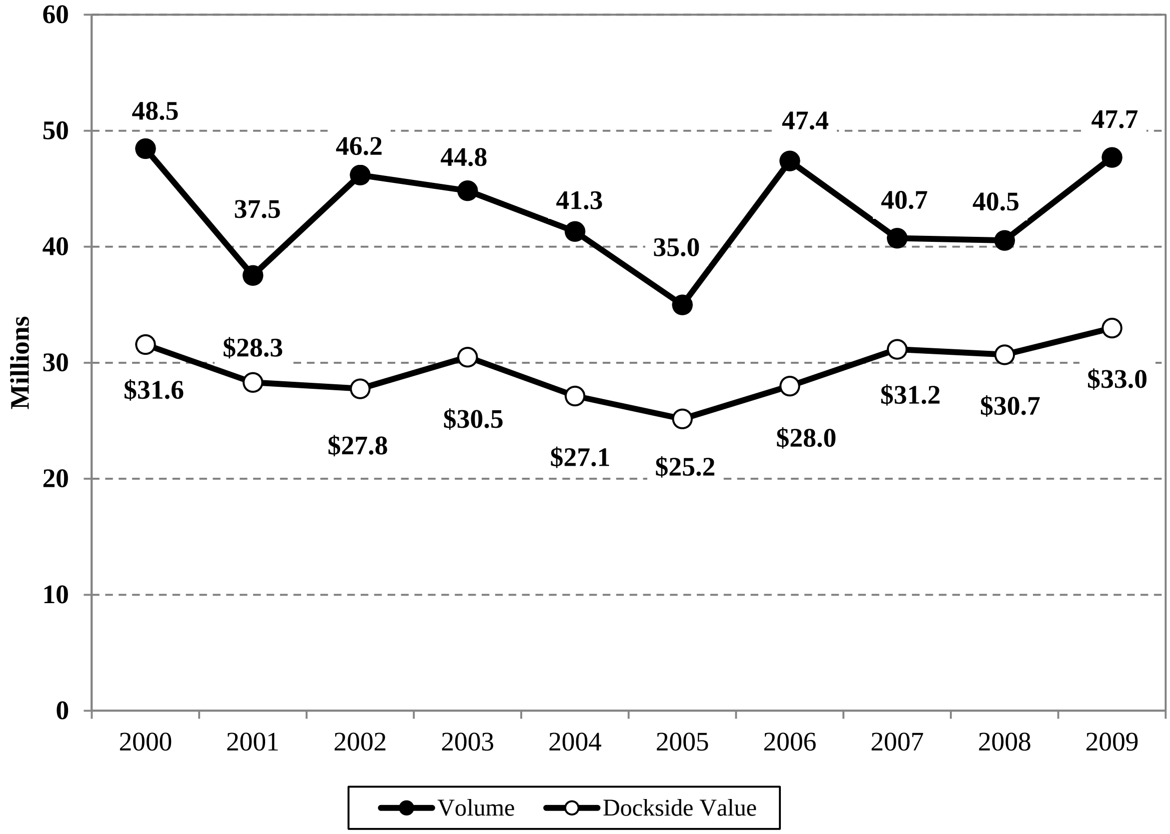


**Figure 4.8.** **Cumulative Volume and Dockside Value of Blue Crabs Purchased by Resident Business Blue Crab Dealers, By Year: 2000 - 2009**

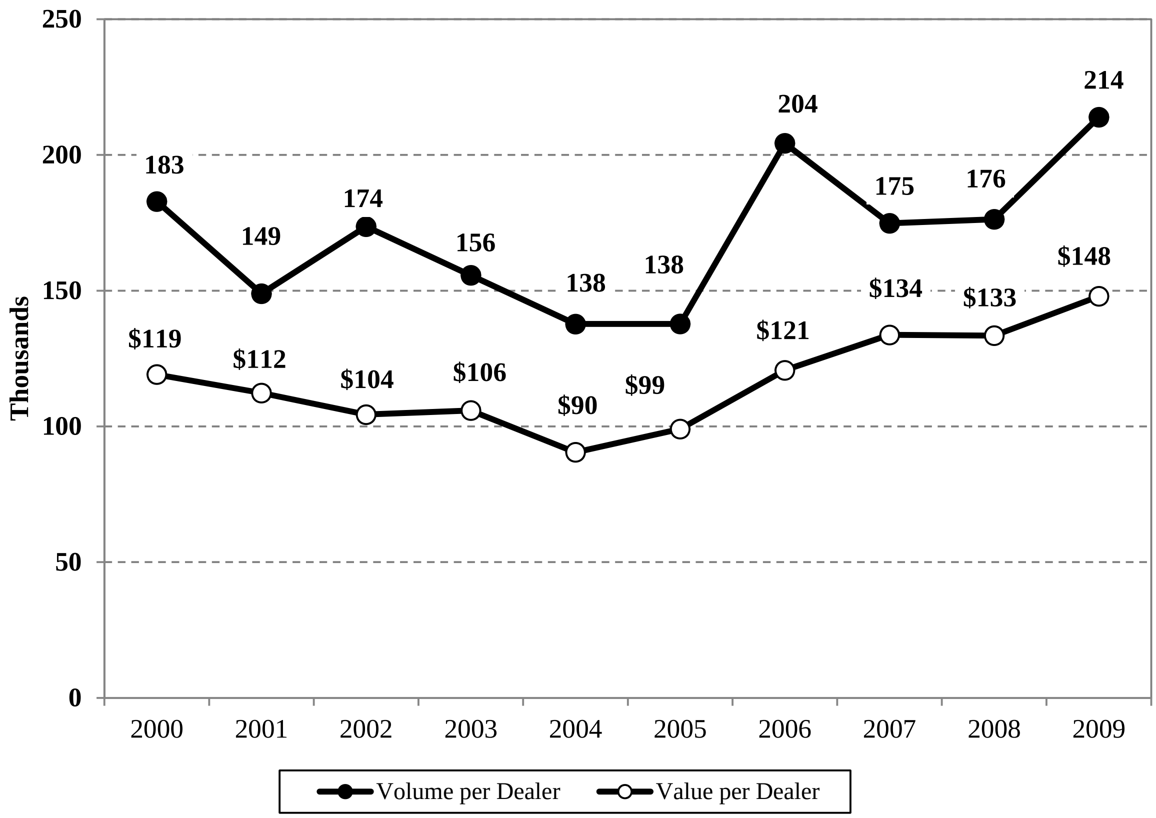


**Figure 4.9.** **Volume and Nominal Dockside Value per Active Resident Business Blue Crab Dealer as Reported in Louisiana Trip Ticket Program, By Year: 2000 - 2009**

The average dockside price per pound for blue crabs paid by active resident business blue crab dealers ranged between $0.60 per pound and $0.75 per pound in the five years before hurricanes Katrina and Rita (Figure 4.10). The average dockside price per pound for blue crabs was $0.72 per pound in the hurricane year of 2005. This measure dropped to $0.59 per pound in 2006 and rose to $0.76 per pound in 2007 and 2008 and $0.79 per pound in 2009.

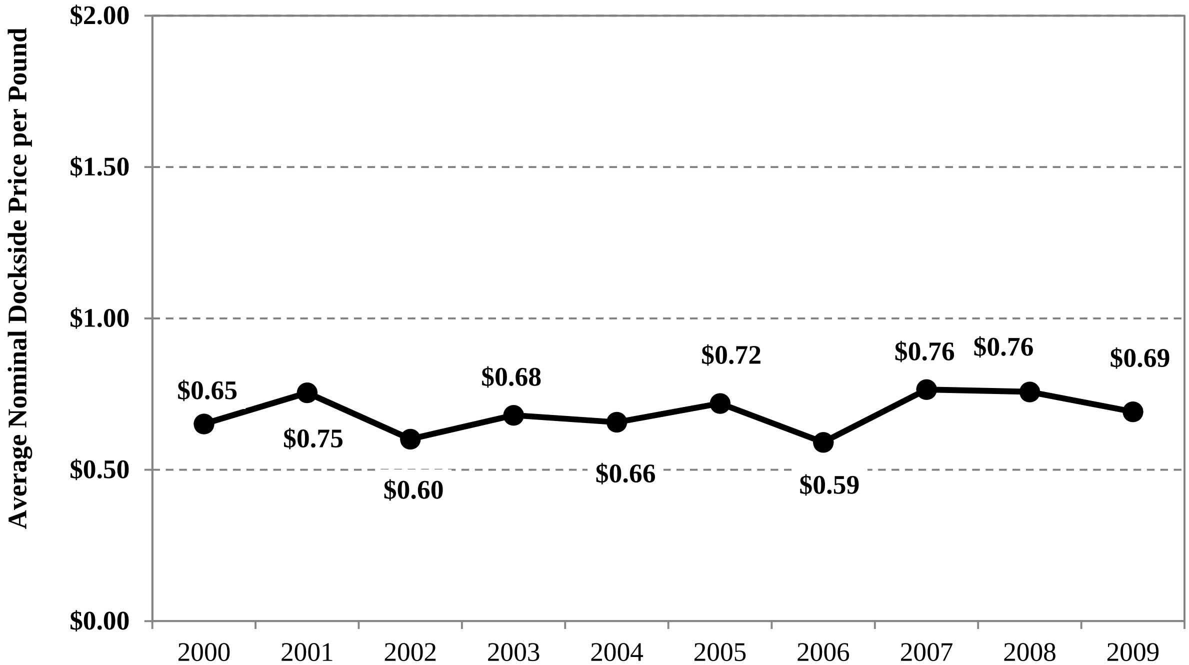


**Figure 4.10. Average Dockside Price per Pound for Blue Crabs Purchased by Active Resident Business Blue Crab Dealers in Louisiana According to the Louisiana Trip Ticket Program, By Year: 2000-2009**

### 4.4.2. Active Resident Vehicle Blue Crab Dealers

The number of active resident vehicle blue crab dealers was fairly low throughout the study timeframe from 34 in 2000 and 29 in 2001 to 44 in 2004, the year before hurricanes Katrina and Rita (Figure 4.7). The number fell to 30 in the hurricane ear of 2005 and rose to 39 in 2007 and 37 in 2008. Following hurricanes Gustav and Ike, the number of active resident vehicle blue crab dealers rose to a period maximum of 2009.

Resident vehicle blue crab dealers account for a small portion of all the blue crabs purchased by dealers in Louisiana, approximately 5.39 percent of the total volume of all crabs purchased directly from commercial fishermen by all commercial seafood dealers between 2000 and 2009. The volume and dockside value (Figure 4.11) of blue crabs purchased by resident vehicle blue crab dealers fell from 3.28 million pounds and $2.52 million in 2001 to 2.06 million pounds and $1.62 million in 2004. Volume and

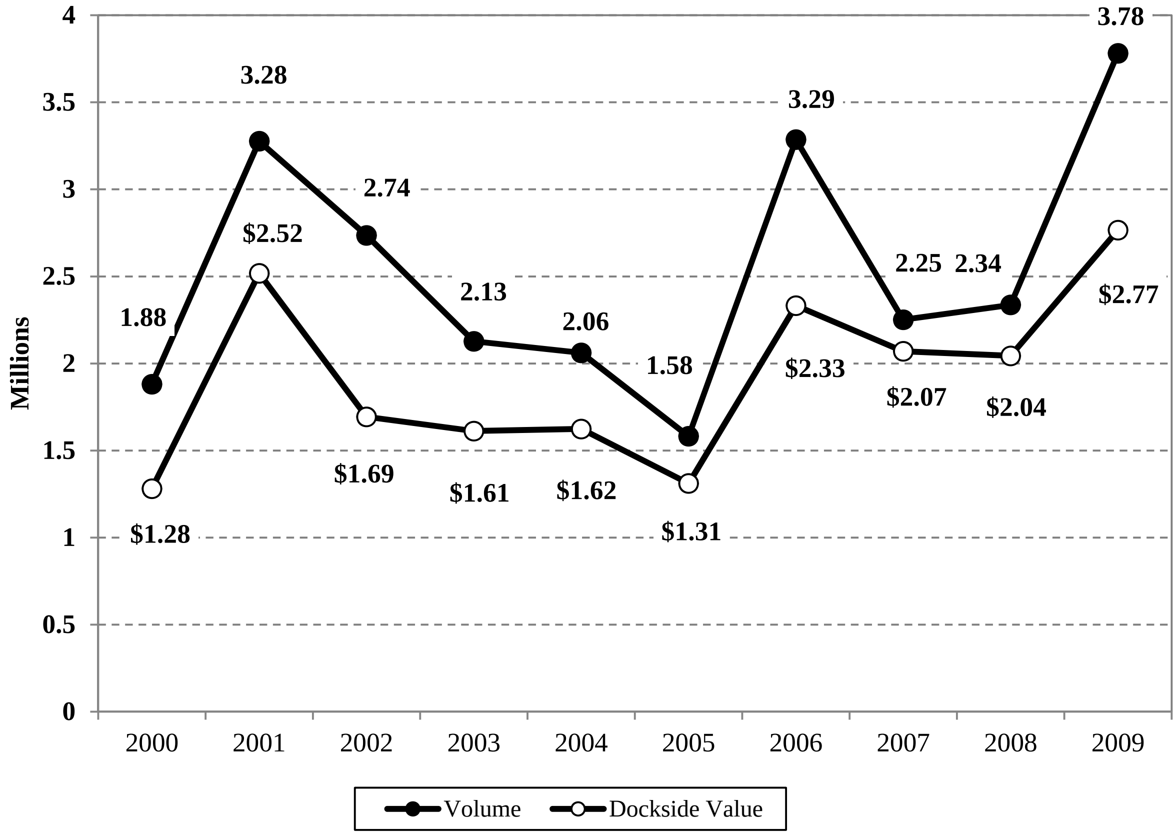


**Figure 4.11. Cumulative Volume and Dockside Value of Blue Crabs Purchased by Active Resident Vehicle Blue Crab Dealers, By Year: 2000 - 2009**

dockside value for this category of dealers fell to 1.58 million and $1.31 million in the hurricane year of 2005. Following hurricanes Katrina and Rita, volume rose to 3.29 million pounds and dockside value rose to$ 2.33 million. By the hurricane year of 2008, the volume of blue crab dealers purchased by resident vehicle blue crab dealers fell to 2.34 million and dockside value declined to $2.04 million. In the year after hurricanes Gustav and Ike, volume rose to a period maximum of 3.78 million pounds and dockside value rose to $2.77 million.

Volume and dockside value per active resident vehicle blue crab dealer were calculated by dividing the volume and dockside value, respectively, of blue crabs purchased by active resident vehicle blue crab dealers for a given year by the corresponding number of resident vehicle blue crab dealers. The per dealer volume of blue crabs among active resident vehicle dealers was typically one-third or one-half of the per dealer volume among resident business dealers in most years during the study timeframe. Volume per active resident vehicle blue crabs dealer fell from 113 thousand pounds per dealer in 2001 to 47 thousand pounds per dealer in 2004 (Figure 4.12). Volume per resident vehicle dealer in the hurricane year of 2005 (53 thousand pounds) was actually a bit higher than the per dealer value for the previous year. Volume per resident vehicle blue crab dealer reached 94 thousand pounds per dealer in the year after hurricanes Katrina and Rita but subsequently declined to 58 thousand pounds per dealer in 2007. The volume per active resident vehicle dealer rose to 63 thousand pounds per dealer in the hurricane year of 2008 and 77 thousand pounds per dealer in 2009.

The dockside value per active resident vehicle blue crab dealer in any given year was usually less than half the per dealer dockside value among active resident business blue crab dealers. Before hurricanes Katrina and Rita the per dealer dockside value of blue crabs among resident vehicle dealers (Figure 4.12) fell from $87 thousand per dealer in 2001 to $37 thousand pounds per dealer in 2004. Value per dealer was somewhat higher in the hurricane year of 2005 and rose to $67 thousand per dealer in 2006. Dockside value per active resident vehicle blue crab dealer afterwards fell to $53 thousand per dealer in 2007 and $56 thousand per dealer in 2009.

In the portion of the study timeframe before hurricanes Katrina and Rita, the average price per pound of blue crabs paid by resident vehicle blue crab dealers (Figure 4.13) rose from $0.68 per pound in 2000 to $0.79 per pound in 2004. In the hurricane year of 2005, the average price paid by resident vehicle dealers in Louisiana was $0.83 per pound. The average price per pound in the years after hurricanes Katrina and Rita was generally higher than the average prices in the year before the hurricanes.

The average price per pound of blue crabs paid by resident vehicle dealers was higher than the average price per pound paid by resident business dealers in every year of the study timeframe.

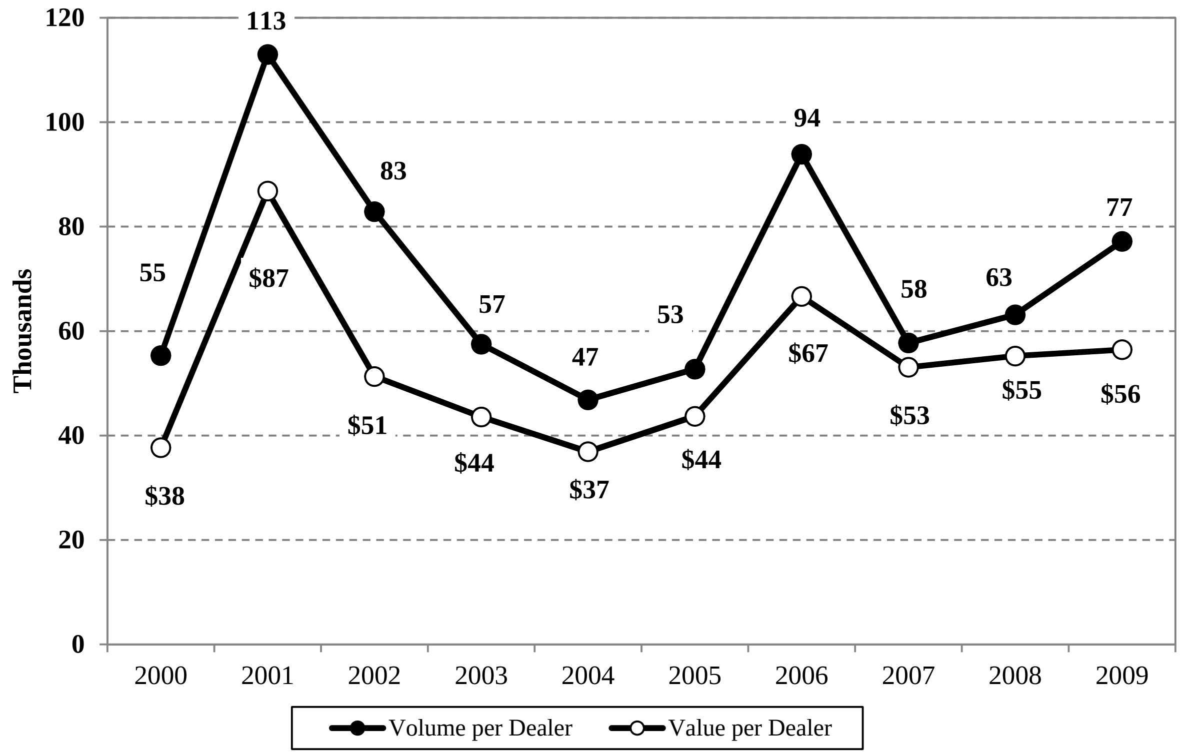


**Figure 4.12. Cumulative Volume and Dockside Value per Active Resident Vehicle Blue Crab Dealer as Reported in Louisiana Trip Ticket Program, By Year: 2000 - 2009**

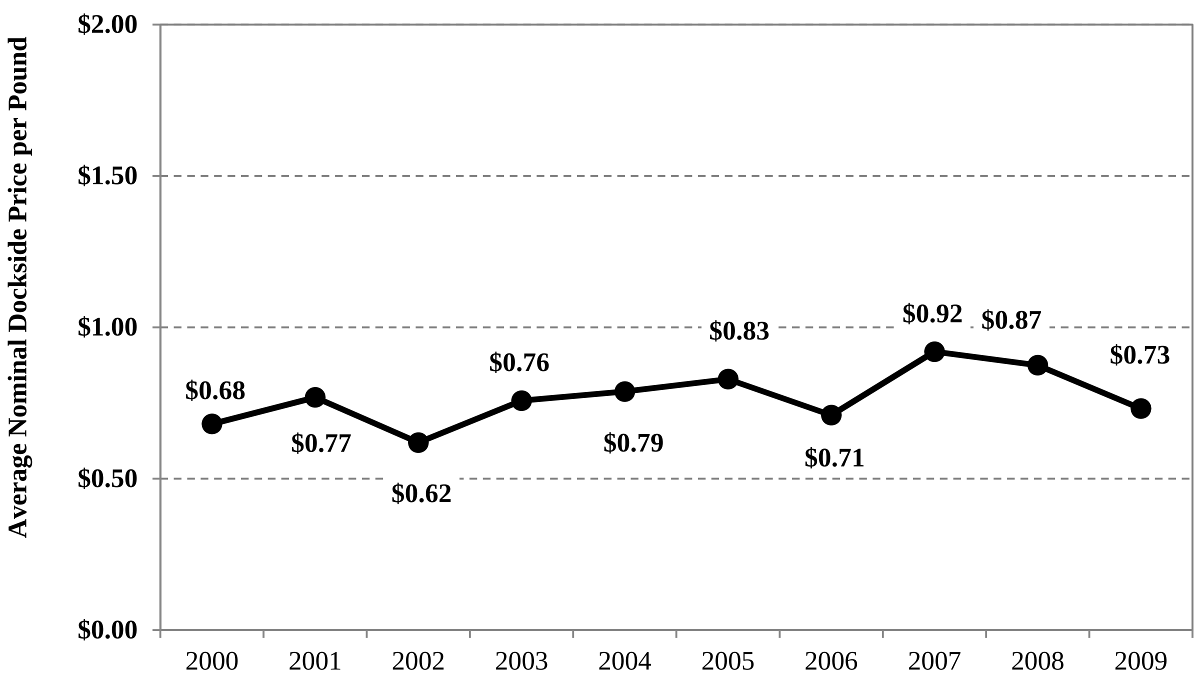


**Figure 4.13. Average Dockside Price per Pound for Blue Crabs Purchased by Active Resident Vehicle Blue Crab Dealers in Louisiana According to the Louisiana Trip Ticket Program, By Year: 2000-2009**

### 4.4.3. Active Resident Fresh Products Blue Crab Dealers

Active resident fresh products blue crab dealers varied in number from 63 in 2000 to 36 in 2001 to 64 in 2004 before hurricanes Katrina and Rita (Figure 4.7). The number of active fresh products blue crab dealers dropped to 55 in the hurricane year of 2005. The count climbed to 101 in 2006 but then decreased to 64 in 2007 and 69 in 2009.

The cumulative volume of blue crabs reported on trip tickets by resident fresh products dealers was approximately 0.05 percent of the total volume of all blue crabs purchased by all blue crab dealers between 2000 and 2009. Before hurricanes Katrina and Rita, volume ranged between 92 thousand pound and 211 thousand pounds (Figure 4.14). Volume in the hurricane year of 2005 (181 thousand pounds) was slightly higher than the volume in the previous year (175 thousand pounds). Volume rose to 526 thousand pounds in the year after hurricanes Katrina and Rita and then declined to 221 thousand pounds in 2007, 405 thousand pounds in 2008, and 350 thousand pounds in 2009.

Dockside value of blue crabs purchased from commercial fishermen by active resident fresh products blue crab dealers (Figure 4.14) rose from a period low of $140 thousand in 2001 to $306 thousand in 2004. In the hurricane year of 2005, dockside value fell to $163 thousand and then rose to $428 thousand in 2006. Dockside value fell by more than half to $192 thousand in the hurricane year of 2008 and rose to $350 thousand in 2009.

The volume per active resident fresh products blue crab dealer changed erratically throughout the study timeframe. In every year of the study period before hurricanes Katrina and Rita, volume per active resident fresh products dealer was less than four thousand pounds (Figure 4.15). For three of the four years after hurricanes Katrina and Rita, volume per active fresh products dealer was greater than five thousand pounds per dealer.

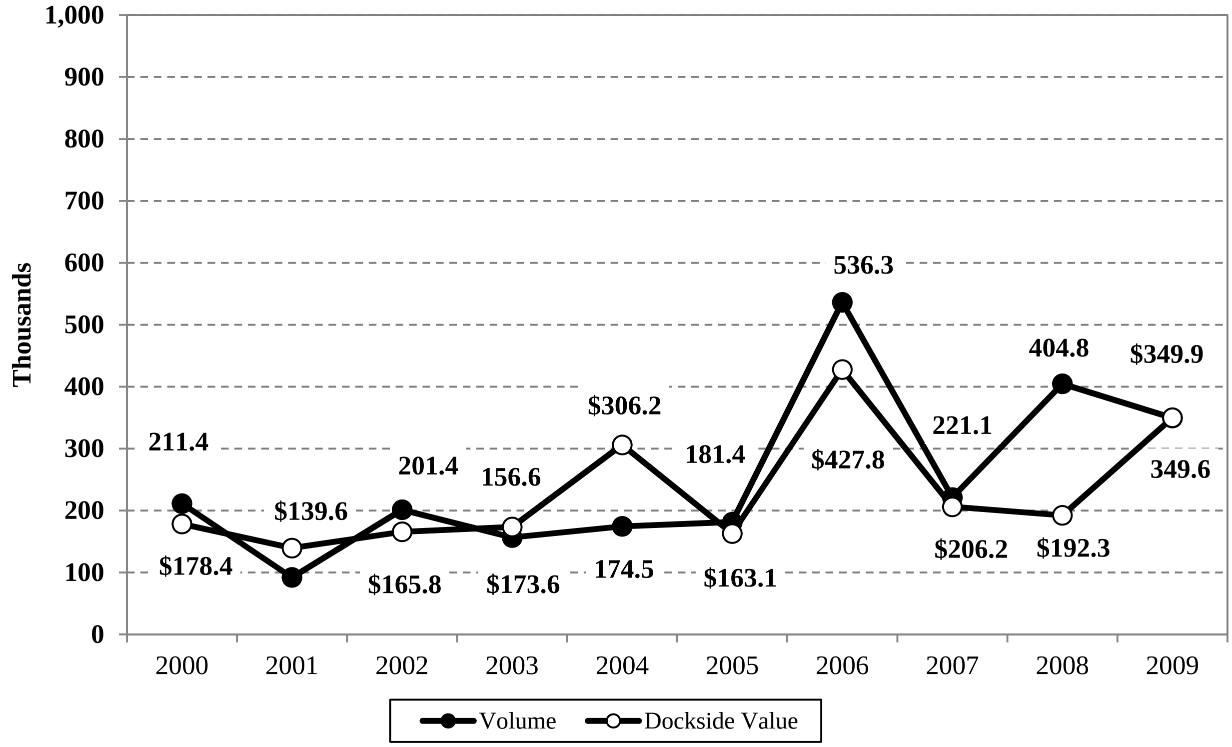


**Figure 4.14. Cumulative Volume and Dockside Value of Blue Crabs Purchased by Active Resident Fresh Products Dealers, By Year: 2000 - 2009**

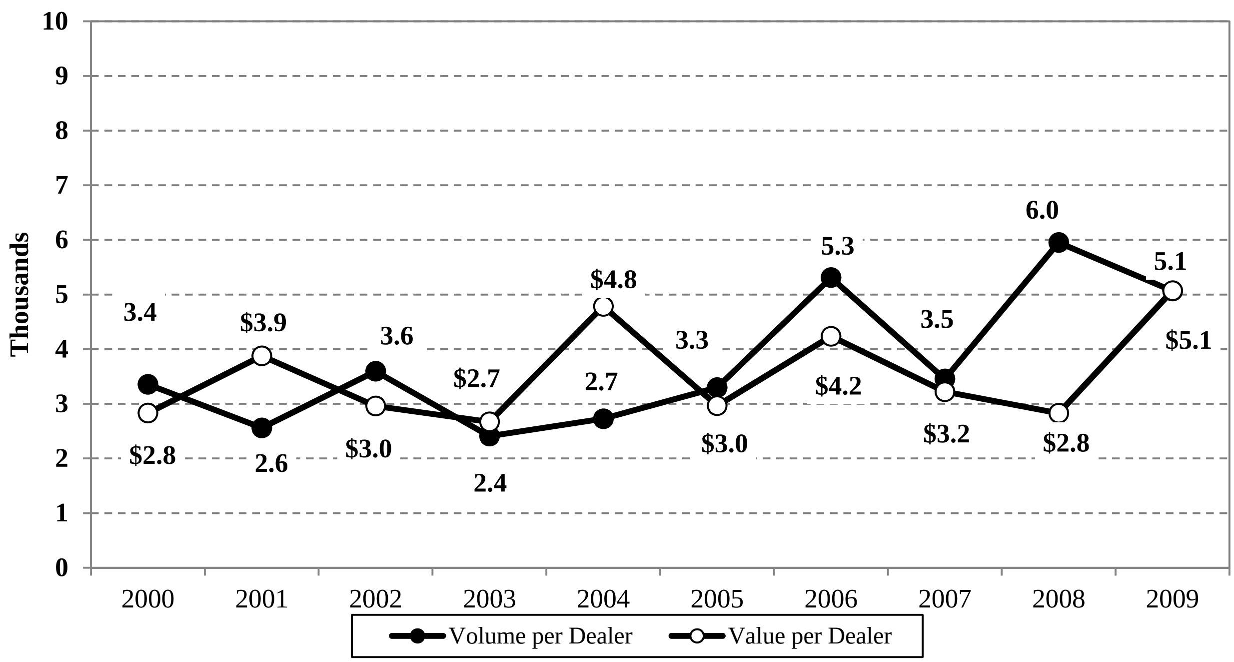


**Figure 4.15. Volume and Nominal Dockside Value per Active Resident Fresh Products Blue Crab Dealer as Reported in Louisiana Trip Ticket Program, By Year: 2000 - 2009**

The average price per pound of blue crabs among resident fresh products blue crab dealers was highly variable throughout the study timeframe (Figure 4.16). From one year to the next, the average price per pound could change as much as $0.67 per pound or $0.85 per pound. In the hurricane year of 2005, the average price paid by resident fresh products dealers in Louisiana was $0.90 per pound. The average price per pound in the years after hurricanes Katrina and Rita was generally lower than the average prices in the years before the hurricanes.

The average price per pound of blue crabs among resident fresh products dealers was higher than the average price per pound paid by resident business and resident vehicle dealers in nine of the 10 years of the study timeframe. In the hurricane year of 2008, the average price per pound among fresh products dealer was lower than the average price per paid pound by resident business dealers and resident vehicle dealers.

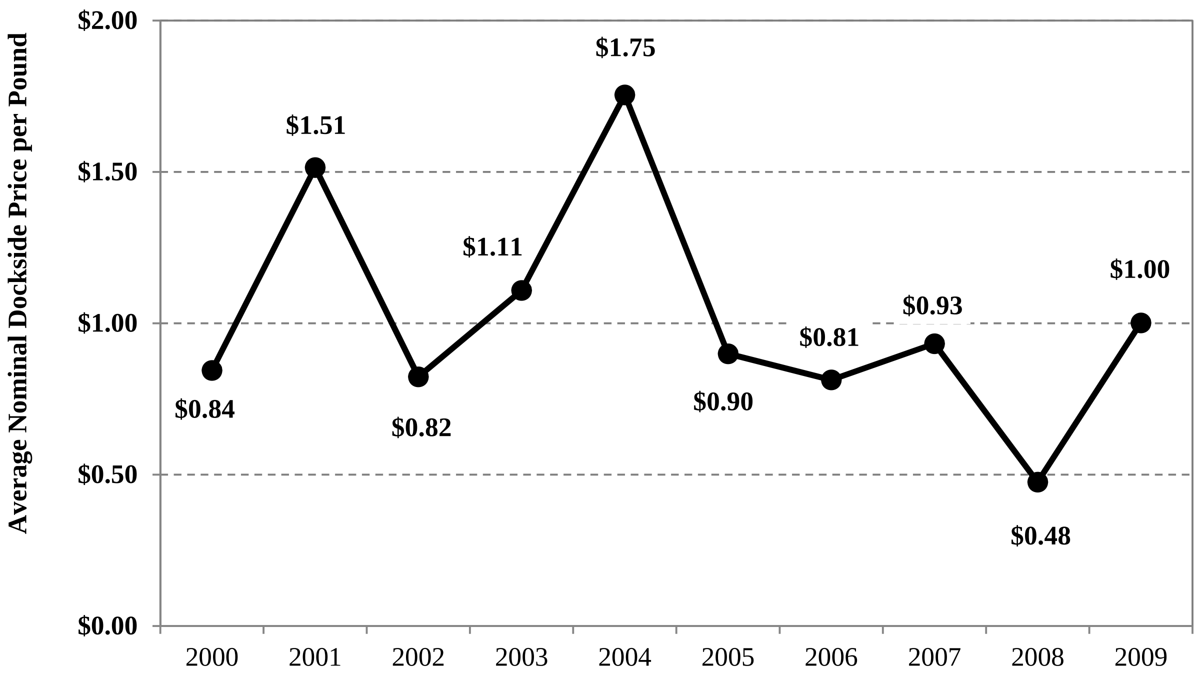


**Figure 4.16. Average Dockside Price per Pound for Blue Crabs Purchased by Active Resident Fresh Products Blue Crab Dealers in Louisiana According to the Louisiana Trip Ticket, By Year: 2000-2009**

## 4.5. Percentage Changes in Active Blue Crab Dealer Numbers, Volume, and Dockside Value

This section presents tables for considering the possible changes in dealer participation and activity only among resident business blue crab dealers. Changes in the number of active blue crab dealers (Table 4.1) and for the volume (Table 4.2) and dockside value (Table 4.3) of the blue crabs they purchased were similar to changes seen among all active blue crab dealers. (See chapter 2.)

Changes for dealers in other dealer license categories are not presented because they accounted for relatively small portions of the blue crab dealer sector. Changes observed for these categories may not be representative of broader changes reflecting the blue crab dealer sector in general.

**Table 4.2. Change in Number of Dealers in the Resident Business Blue Crab Dealer Category in Specified Year as a Percentage of Number in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | 9.4% | **-7.4%** | **-15.4%** | **-15.0%** | -16.1% | -18.7% |
| | 2004 | | **-15.3%** | **-22.7%** | **-22.3%** | -23.3% | -25.7% |
| | 2005 | | | -8.7% | -8.3% | -9.4% | -12.2% |
| | 2006 | | | | 0.4% | -0.9% | -3.9% |
| | 2007 | | | | | **-1.3%** | **-4.3%** |
| | 2008 | | | | | | **-3.0%** |

**Table 4.3. Change in the Volume of Blue Crabs Purchased by Dealers in the Resident Business Blue Crab Dealer Category in Specified Year as a Percentage of Volume in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | -5.4% | **-19.9%** | **8.5%** | **-6.7%** | -7.1% | 9.3% |
| | 2004 | | **-15.3%** | **14.7%** | **-1.4%** | -1.9% | 15.5% |
| | 2005 | | | 35.5% | 16.4% | 15.9% | 36.3% |
| | 2006 | | | | -14.1% | -14.5% | 0.7% |
| | 2007 | | | | | **-0.5%** | **17.1%** |
| | 2008 | | | | | | **17.7%** |

**Table 4.4. Change in the Dockside Value of Blue Crabs Purchased by Dealers in the Resident Business Dealer Volume Category in Specified Year as a Percentage of Dockside Value in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | -6.6% | **-13.4%** | **-3.6%** | **7.2%** | 5.6% | 13.6% |
| | 2004 | | **-7.3%** | **3.1%** | **14.8%** | 13.1% | 21.6% |
| | 2005 | | | 11.3% | 23.8% | 22.0% | 31.1% |
| | 2006 | | | | 11.3% | 9.6% | 17.8% |
| | 2007 | | | | | **-1.5%** | **5.9%** |
| | 2008 | | | | | | **7.5%** |

# Chapter 5.
# Active Crab Dealers by Geographic Region of Louisiana

## 5.1 Regional Analysis

This section examines differences in the participation and activity of active crab dealers based on the parish in which each is located. Statistics for the volume and dockside value of crab thus pertain to the dealers' location and not the area from which the crabs were harvested.

The geographic divisions examined in this section are identical to the regions defined as southeast Louisiana and southwest Louisiana in CHAPTER 1 of this report (Figure 1.1). Southeast Louisiana roughly consists of 12 (primarily coastal) parishes from Lafourche Parish eastward to Mississippi state boundary. Southwest Louisiana is made up of 15 parishes, primarily coastal parishes from Terrebonne Parish westward to the Texas state boundary plus several parishes in the vicinity of the Atchafalaya Basin.

In every year during the study timeframe, there were more active crab dealers in southeast Louisiana than in southwest Louisiana (Figure 5.1). The number of active crab dealers in southeast Louisiana rose from 196 in 2000 and 184 in 2001 to a period maximum of 244 in 2004. The number of active crab dealers fell to197 in the hurricane year of 2005 and to185 in the following year. The count of dealers in the region for the remainder of the study time frame stayed beneath the number of dealers seen in the three years before hurricanes Katrina and Rita.

The number of active crab dealers in southwest Louisiana rose from 135 in 2001 to 166 in 2003 and 2004 in 2004 (Figure 5.1). The number of active dealers in the region dropped to 143 in the hurricane year of 2005. The regional count rose to a period maximum of 182 in 2006, fell to 134 in the hurricane year of 2008, and rose to 166 in the year following hurricanes Gustav and Ike.

There was a small number of active crab dealers in the "rest of the state", all parishes outside southeast and southwest Louisiana. The number of dealers in the rest of the state was above 20 in every year before hurricanes Katrina and Rita. Since 2005, the number of active blue crab dealers was less than 20.

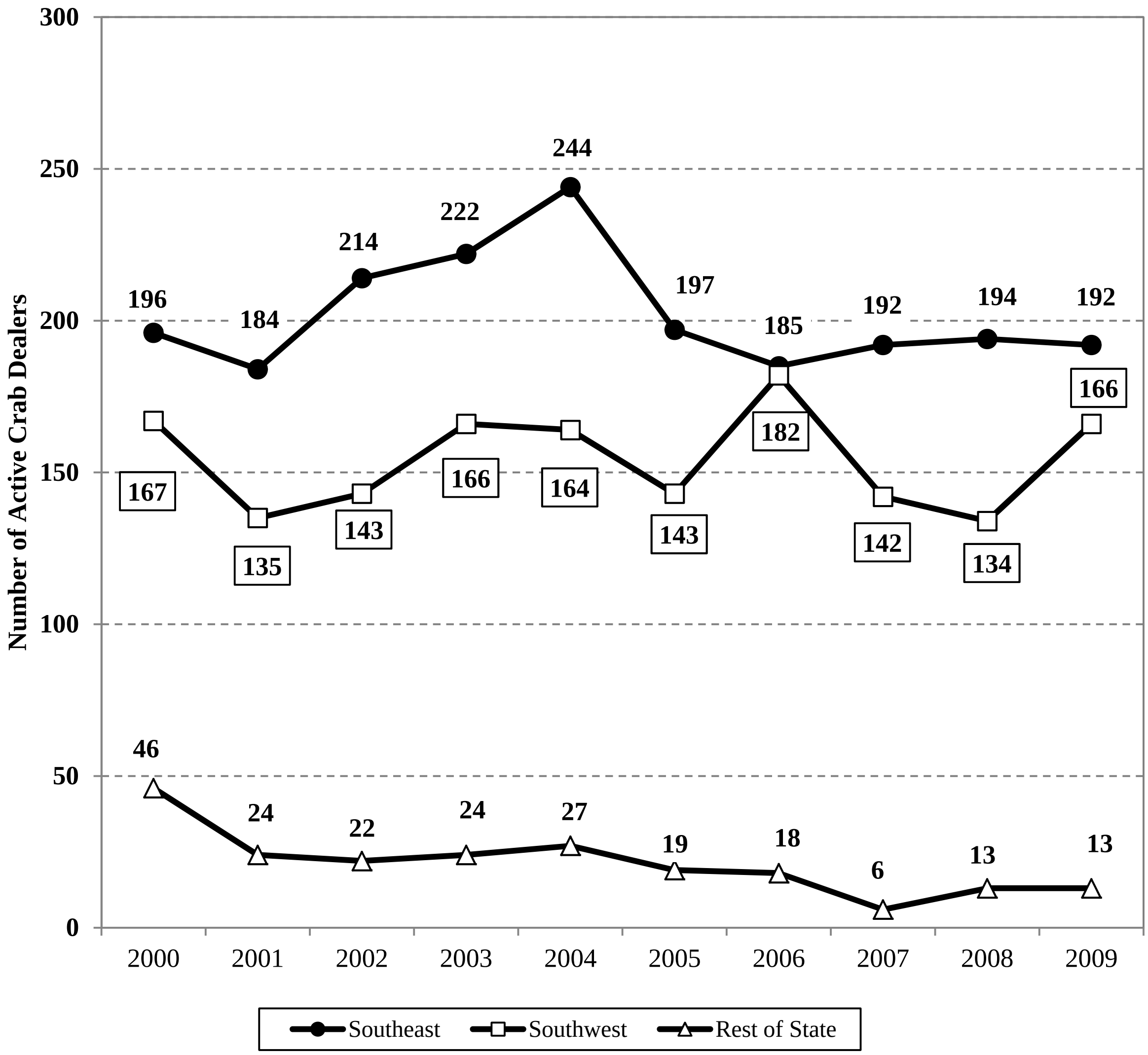


**Figure 5.1. Number of Active Crab Dealers in Southeast and Southwest Louisiana: 2000 to 2009**

The volume of crabs purchased directly from commercial fishermen by dealers in southeast Louisiana was consistently larger than the volume purchased by those in southwest Louisiana. Dealers in southeast Louisiana purchased approximately 57.0 percent of the total volume of all crabs purchased by all dealers in the trip ticket program between 2000 and 2009. Dealers in southwest Louisiana purchased about 42.6 percent and dealers in the rest of Louisiana purchased less than one-half of one percent of the total volume of crabs purchased by all crab dealers across the study timeframe.

In the years before hurricanes Katrina and Rita, the volume of crabs purchased by active dealers in southeast Louisiana declined from 28.6 million pounds in 2002 to 27.4 million pounds in 2004 (Figure 5.2). Regional volume dropped to 20.7 million pounds in the hurricane year of 2005 and then climbed to 29.7 million pounds in 2007. Volumes in 2007 and 2008 were similar to pre-hurricane values. In 2009, the year after hurricanes Gustav and Ike, the volume of blue crabs purchased by dealers in southeast Louisiana reached a period maximum of 31.9 million pounds.

The volume of crabs purchased by dealers in southwest Louisiana declined from 24.3 million pounds in 2000 to 16.9 million pounds in 2004. The volume in the hurricane year of 2005 at 17.3 million pounds was somewhat higher than the volume for the previous year. Regional volume rose to 23.1 million in 2006 but then decreased to 17.2 million pounds in the hurricane year of 2008. In 2009, volume in southwest Louisiana rose to 20.4 million pounds.

Like the volume of crab purchases, the dockside value of crabs purchased directly from commercial fishermen by dealers in southeast Louisiana was larger than the dockside value of dealers in southwest Louisiana in every year during the study timeframe (Figure 5.3). In the years before hurricanes Katrina and Rita, dockside value among southeast Louisiana dealers rose to $20.2 million by 2003 and stood at $18.7 million in 2004. In the hurricane year of 2005, dockside value in southeast Louisiana came to a period low of $15.8 million. Regional dockside value rose for the remainder of the study timeframe to a period maximum of $22.0 million in 2009.

Dockside value of crabs purchased by dealers in southwest Louisiana decreased before hurricanes Katrina and Rita from $15.6 million in 2000 to $11.1 million in 2004, a period low for the region. The dockside value for crabs in southwest Louisiana rose to $11.7 million in the hurricane year of 2005 and continued to rise to $14.6 million in 2009.

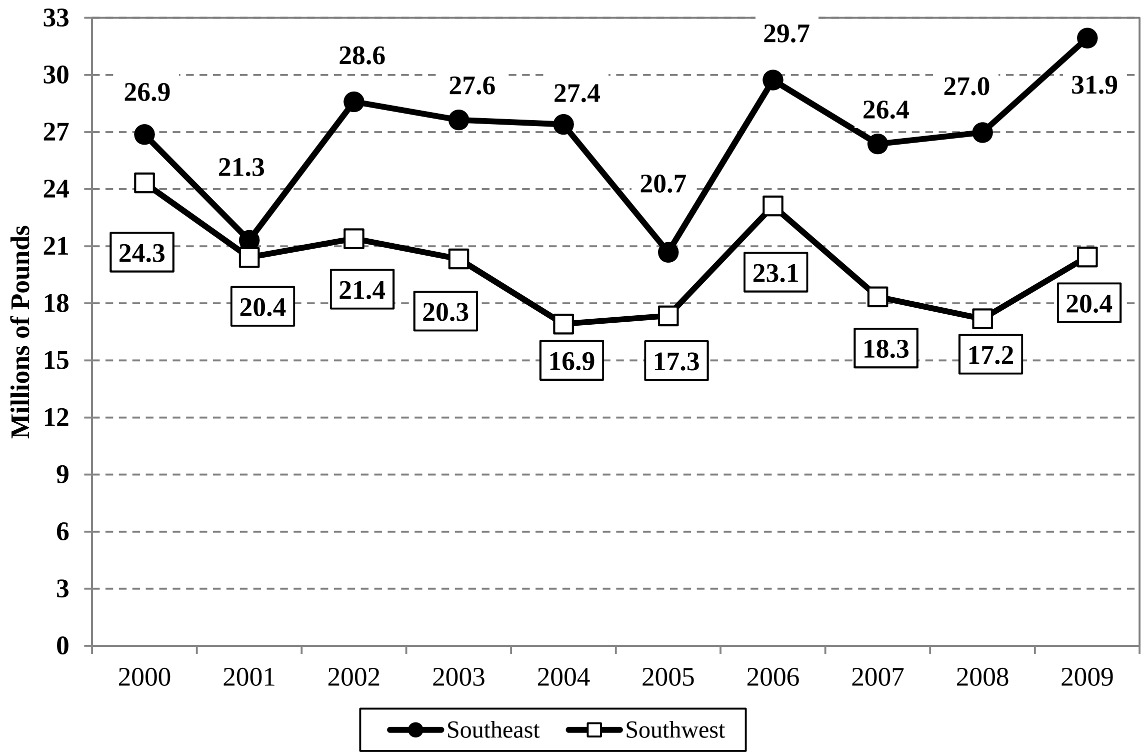


**Figure 5.2. Cumulative Volume of Crabs Purchased by Active Crab Dealers in Southeast Louisiana and Southwest Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

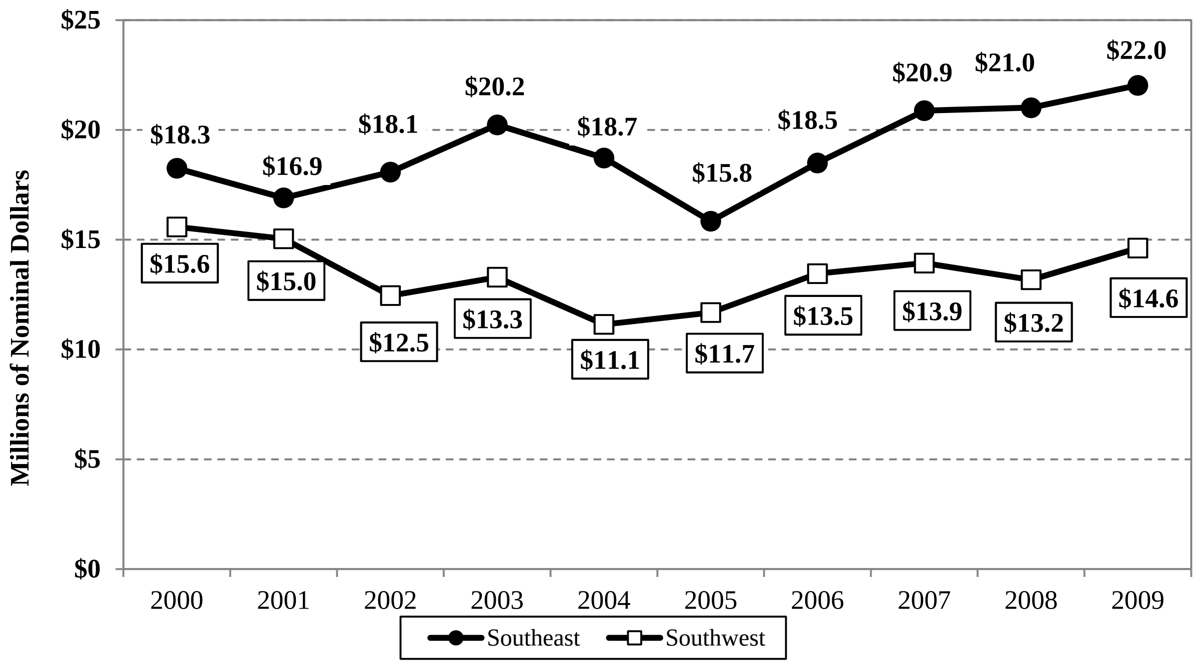


**Figure 5.3. Dockside Value of Crabs Purchased by Active Crab Dealers in Southeast Louisiana and Southwest Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

The average nominal dockside price per pound paid for crabs by active crab dealers in southeast Louisiana ranged between $0.62 in 2006 to $0.79 in 2001 and 2007 (Figure 5.4). Among southwest Louisiana crab dealers, average dockside price per pound ranged from a low of $0.58 (in 2002 and 2006) to a high of $0.77 in 2008. In nine of the 10 years in the study timeframe, the average dockside price per pound paid by southeast Louisiana was greater than the average dockside price paid by dealers in southwest Louisiana. The difference between the average dockside price per pound in the separate reasons ranged from $0.03 to $0.10.

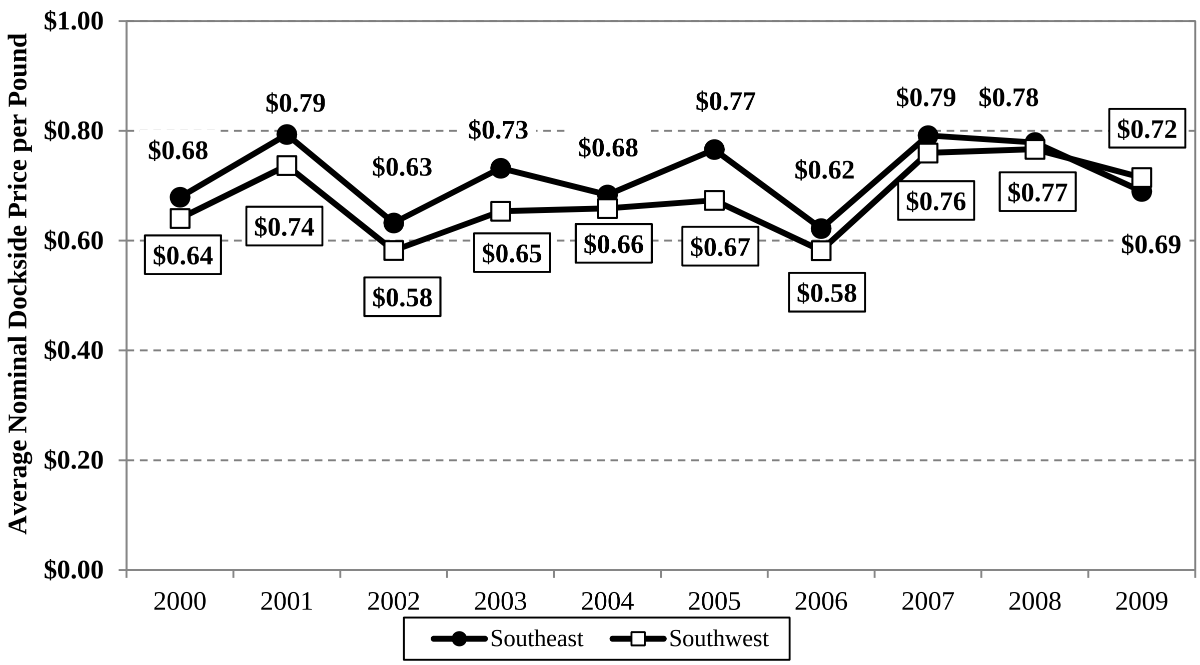


**Figure 5.4. Average Dockside Price per Pound of Crabs Purchased by Active Crab Dealers in Southeast Louisiana and Southwest Louisiana as Reported in Louisiana Trip Ticket Louisiana Trip Ticket Program: 2000 - 2009**

## 5.2. Crab Dealer Activity by Region and License Type

The immediately preceding section examined the participation and economic activity of commercial seafood dealers in different regions: southeast Louisiana and southwest Louisiana. This section expands on that investigation by examining the level of participation and economic activity within each of these regions among different categories of dealer license holders. It first present statistics for resident business crab dealers, resident vehicle crab dealers, and resident fresh products dealers in southeast Louisiana and then presents statistics for the same categories of seafood dealers in southwest Louisiana.

### 5.2.1. Active Resident Business Crab Dealers in Southeast Louisiana

The number of active business crab dealers in southeast Louisiana rose from 147 in 2000 to 182 in 2004 (Figure 5.5). The number dropped to 147 in the hurricane year of 2005 (a 19.2 percent decrease compared to the previous year) and to 125 in 2006. The count of active resident business crab dealers rose to 134 in 2006 and stayed beneath pre-hurricane levels for the remainder of the study timeframe.

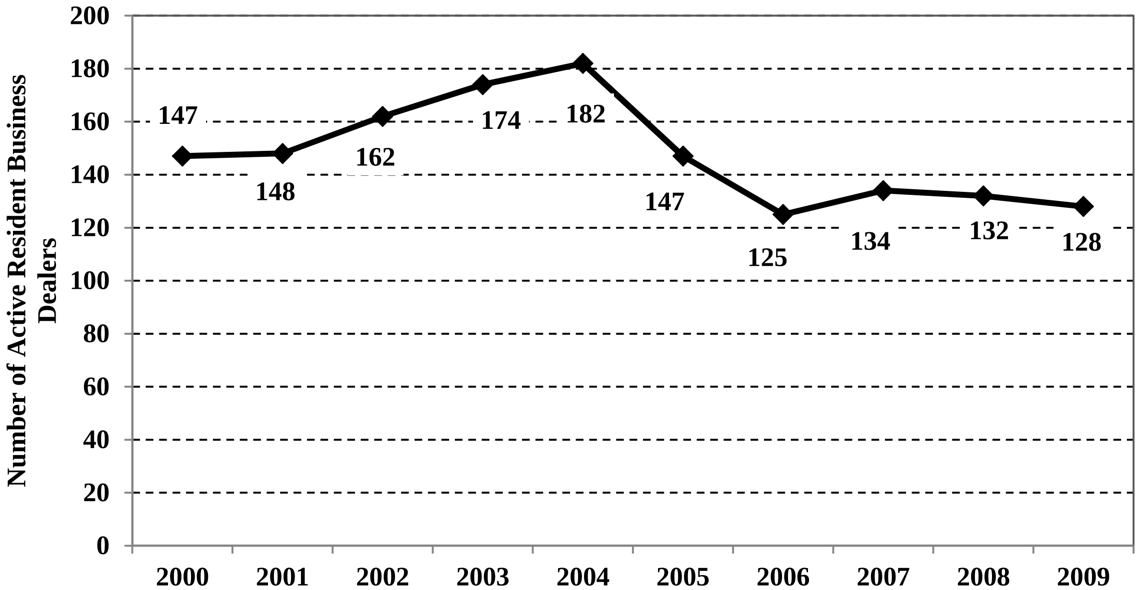


**Figure 5.5. Number of Active Business Resident Crab Dealers in Southeast Louisiana: 2000-2009**

The volume and dockside value of crabs purchased by active resident business crab dealers in southeast Louisiana (Figure 5.6) fell from 25.1 million pounds and $16.7 million in 2000 to 18.7 million pounds and $14.5 million in 2001 and rose to levels above 24 million pounds and $16 million for every year between 2002 and 2004. In the hurricane year of 2005, volume and dockside value fell to 17.9 million pounds and $13.7 million. Both measure climbed to 25.6 million pounds and $14.5 million in 2006. Volume was down to 23.5 million pounds in the hurricane year of 2008 but dockside value was higher at

$17.7 million.  Both measures rose to period highs for this category of crab dealers in southeast Louisiana in 2009: 27.6 pounds and $18.8 million.

Volume per active resident business crab dealer and dockside value per active resident business crab dealer were calculated by dividing the cumulative volume and dockside value for each year by the corresponding number of active business crab dealers in the region.

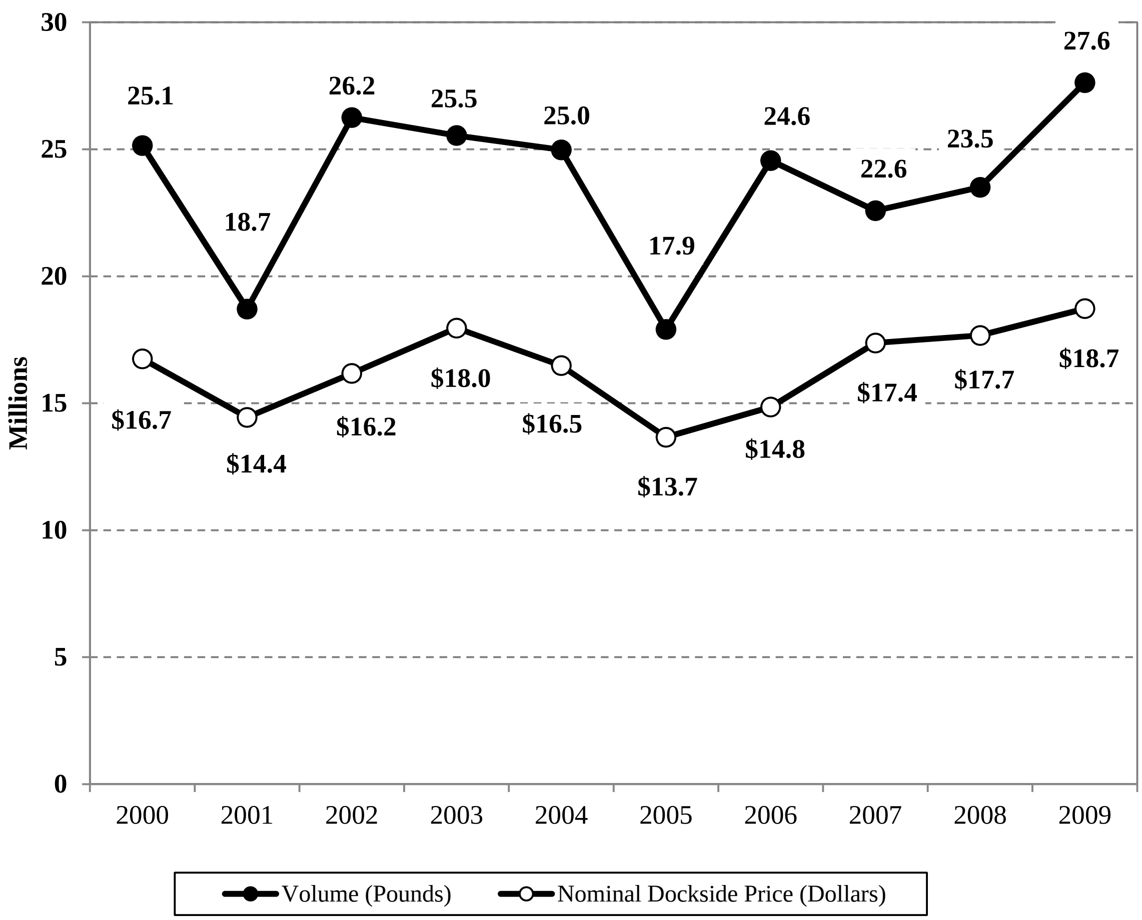


**Figure 5.6. Cumulative Volume and Dockside Value of Crabs Purchased by Active Resident Business Crab Dealers in Southeast Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

Volume per resident business dealer estimates ranged between 126,412 pounds per dealer and 171,068 pounds per dealer in the five years before hurricanes Katrina and Rita (Figure 5.7) and fell to 121,847 pounds in the hurricane year of 2005. Volume per resident business dealer ranged between 168,530 pounds per dealer and 215,825 pounds per dealer in the years in the study timeframe after hurricanes Katrina and Rita.

From 2000 to 2004, dockside value per active resident business crab dealer in southeast Louisiana varied between $90,558 per dealer and $113,931 per dealer (Figure 5.7). In the hurricane year of 2005, the estimate fell to $92,939 per dealer. After hurricanes Katrina and Rita, dockside value per active resident business crab dealer in southeast Louisiana ranged from $118,798 per dealer and $146,308 per dealer.

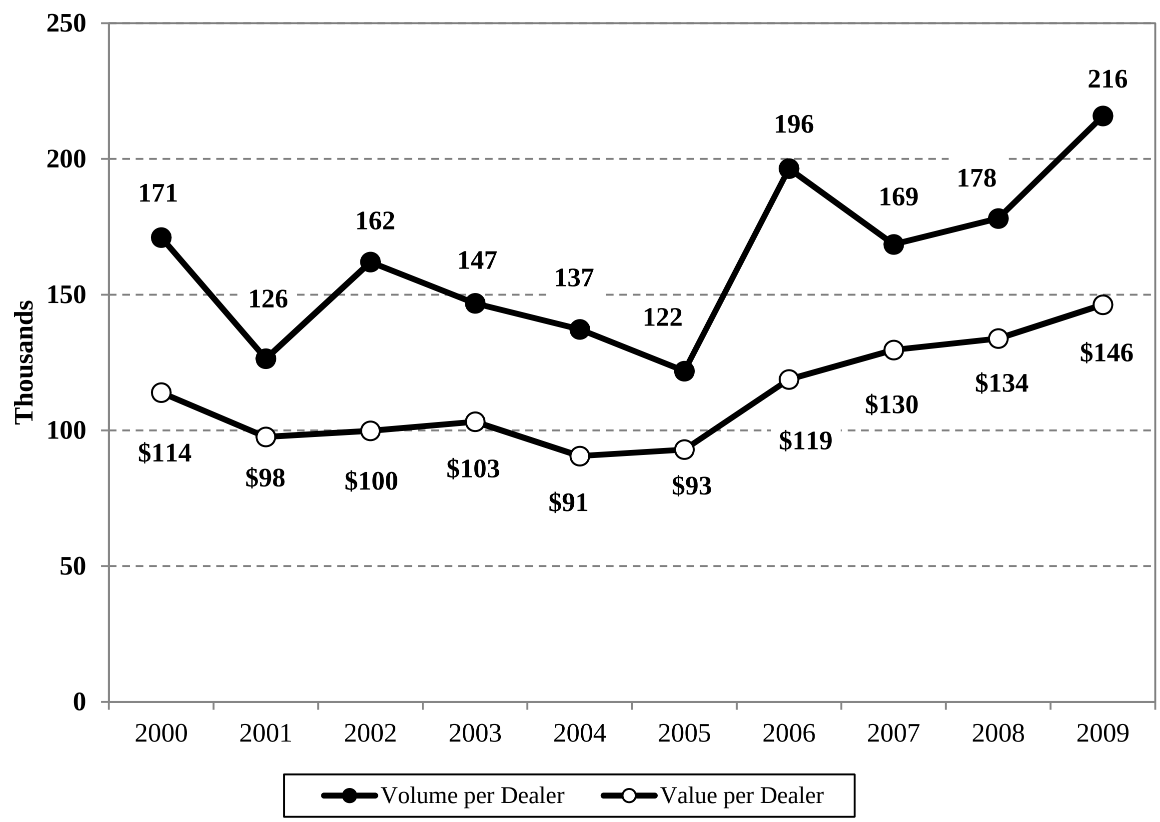


**Figure 5.7. Average Volume and Nominal Dockside Value per Active Resident Business Crab Dealer in Southeast Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

### 5.2.2. Active Resident Vehicle Crab Dealers in Southeast Louisiana

The number of resident vehicle crab dealers in southeast Louisiana ranged from 21 in 2000 to 36 in 2004, the year before hurricanes Katrina and Rita (Figure 5.8). The regional count fell to 27 in the hurricane year of 2005. The measure rose to 36 in 2007 and 42 in 2009.

Between 2000 and 2003, the cumulative volume of crabs purchased by active resident vehicle dealers in southeast Louisiana (Figure 5.9) ranged between 954 thousand pounds and 1.74 million pounds and stood at 1.54 million pounds in 2004 when dockside value was a pre-hurricane period maximum of $1.28 million. The measures for the hurricane year of 2005 were 1.35 million pounds and $1.12 million. In each of the four years after hurricanes Katrina and Rita within the study timeframe, volume and value exceeded two million pounds and two million dollars.

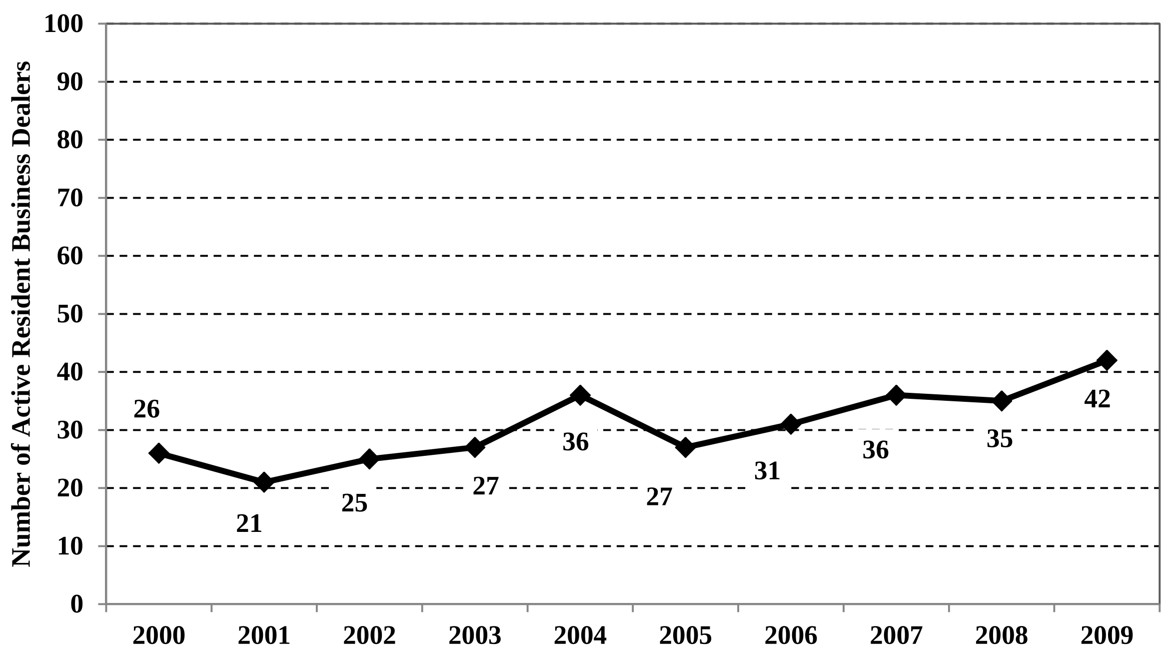


**Figure 5.8. Number of Active Resident Vehicle Crab Dealers in Southeast Louisiana: 2000-2009**

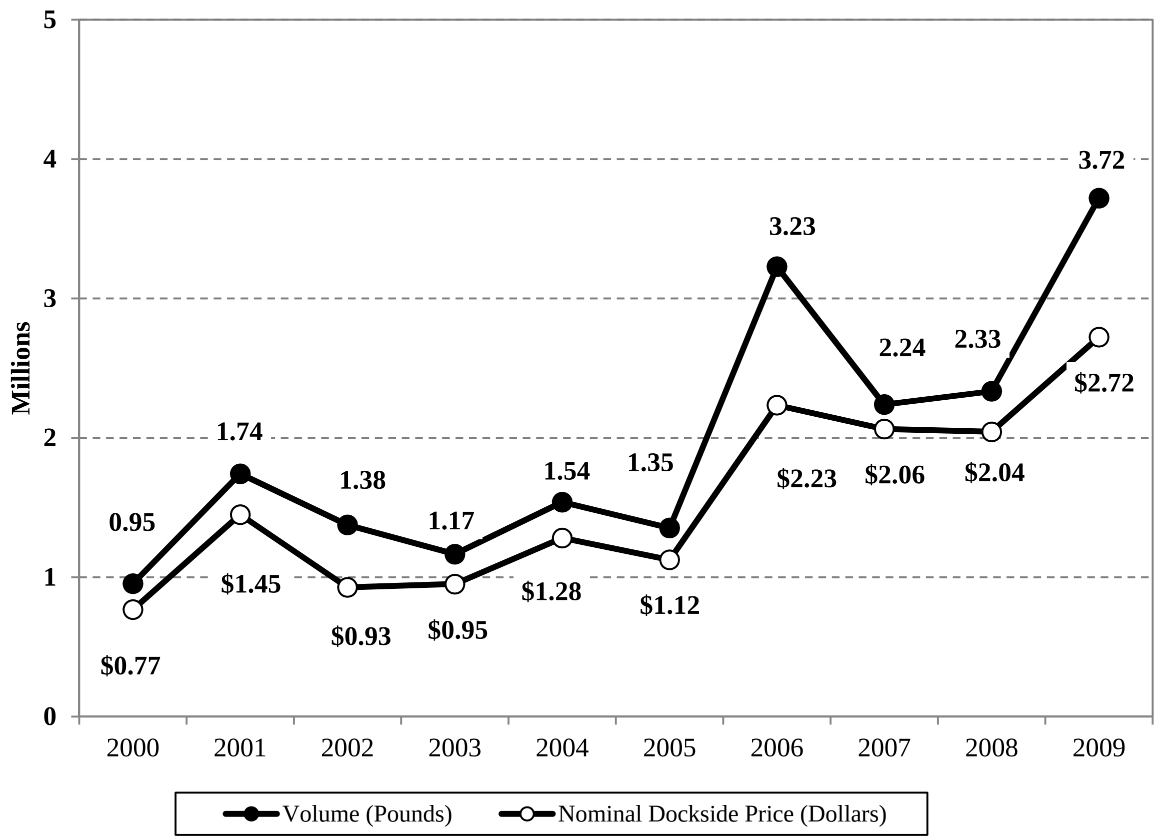


**Figure 5.9. Cumulative Volume and Dockside Value of Crabs Purchased by Active Resident Vehicle Crab Dealers in Southeast Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

Before hurricanes Katrina and Rita, the volume per active resident vehicle crab dealer in southeast Louisiana was as high as 83,977 pounds per dealer in 2001 but was down to 42,753 pounds per dealer in 2004 (Figure 5.10). Volume per dealer in this category rose to 50,121 pounds per dealer in the hurricane year of 2005 then doubled to 104,136 pounds per dealer in 2006. The estimate decreased to 66,706 pounds per dealer in the hurricane year of 2008 and then increased to 88,578 pounds per dealer in 2009.

Dockside value per active resident vehicle crab dealer in southeast Louisiana peaked at $69,015 per dealer in 2001 and fell to $35,228 per dealer in 2003 and $35,606 per dealer in 2004. Dockside value per dealer rose to $41,665 in the hurricane year of 2005 and $72,083 per dealer the following year. The measure fell to $58,387 per dealer in the hurricane year of 2008 and $64,824 per dealer in 2009.

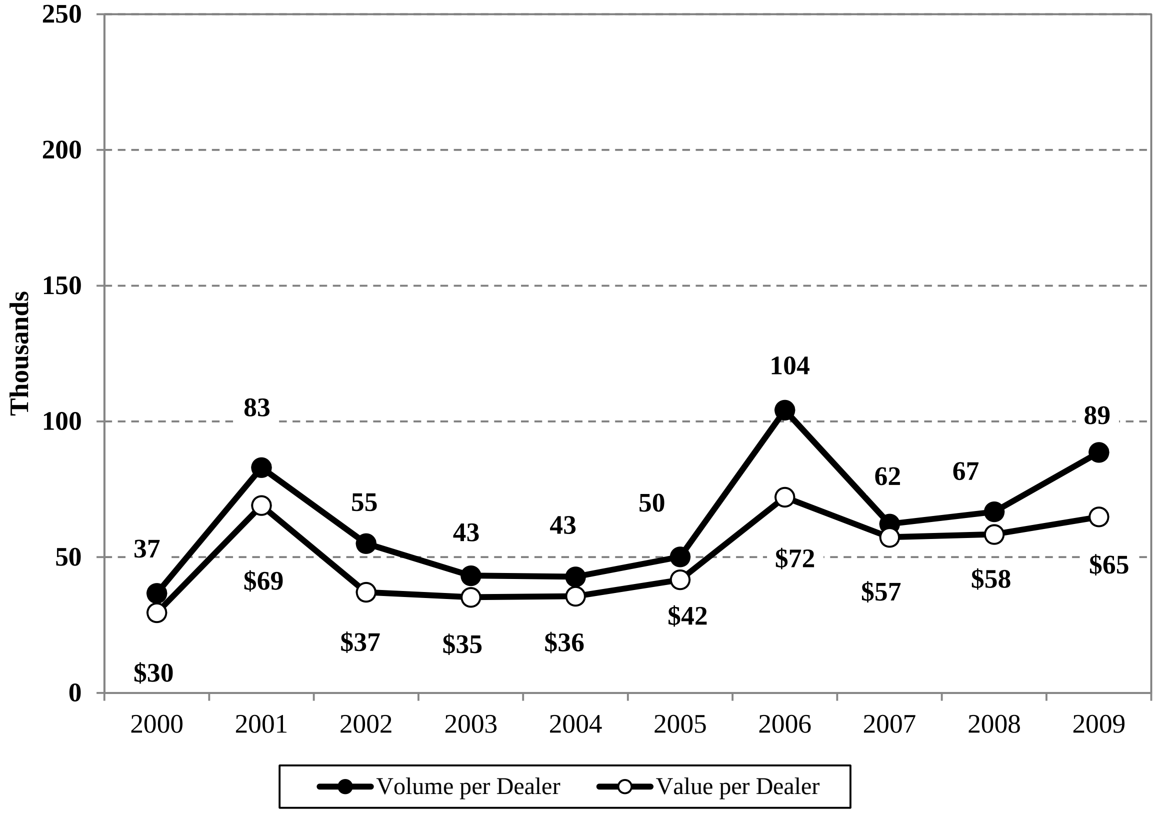


**Figure 5.10. Volume and Nominal Dockside Value per Active Resident Vehicle Crab Dealer in Southeast Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

### 5.2.3. Active Resident Fresh Products Crab Dealers in Southeast Louisiana

Active resident fresh products crab dealers in southeast Louisiana numbered less than30 in every year throughout the study timeframe. From 2004 to the hurricane year of 2005, the number of dealers in southeast Louisiana decreased from 24 to 20 (Figure 5.11). The number varied moderately between 19 and 26 for the remainder of the period.

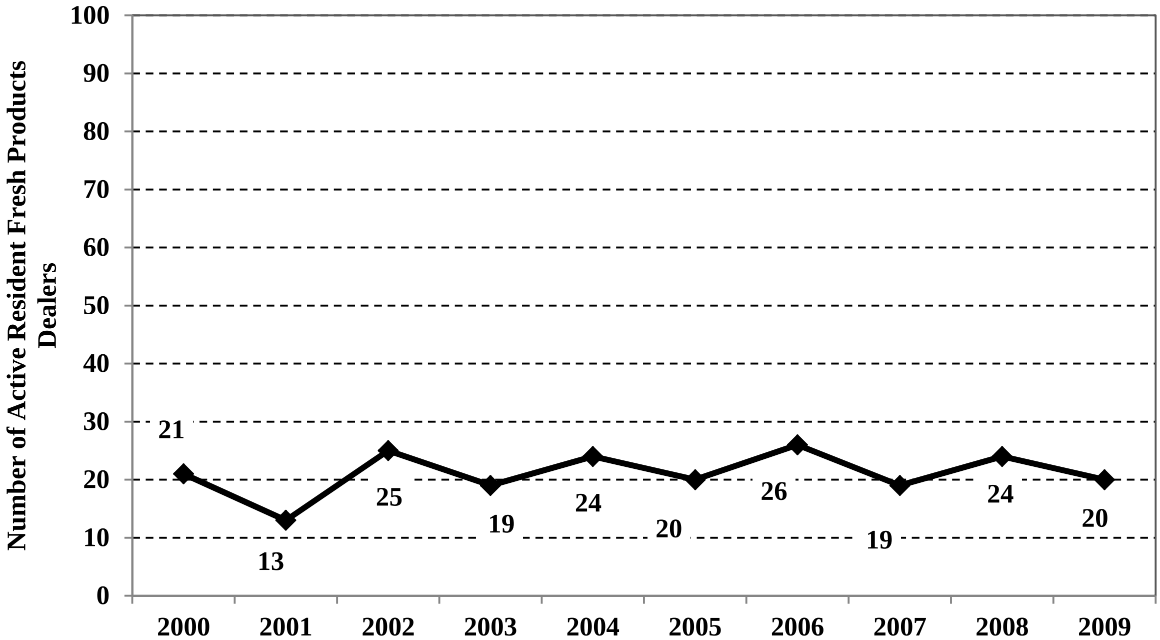


**Figure 5.11. Number of Active Resident Fresh Products Blue Crab Dealers in Southeast Louisiana: 2000-2009**

The volume and dockside value of crabs for active fresh products crab dealers in southeast Louisiana (Figure 5.12) varied considerably between 2000 and 2004. The volume of crabs among dealers of this sort in southeast Louisiana was 83.9 thousand pounds in the hurricane year of 2005 while the dockside value was $76.5 thousand, higher than in any of the five year before hurricanes Katrina and Rita. In 2006 the volume and dockside value reached period maxima of 280.1 thousand pounds and $183.6 thousand. Volume thereafter fell to 32.4 thousand pounds and $35.4 thousand in the hurricane year of 2008 and 28.3 thousand pounds and $26.4 thousand in 2009.

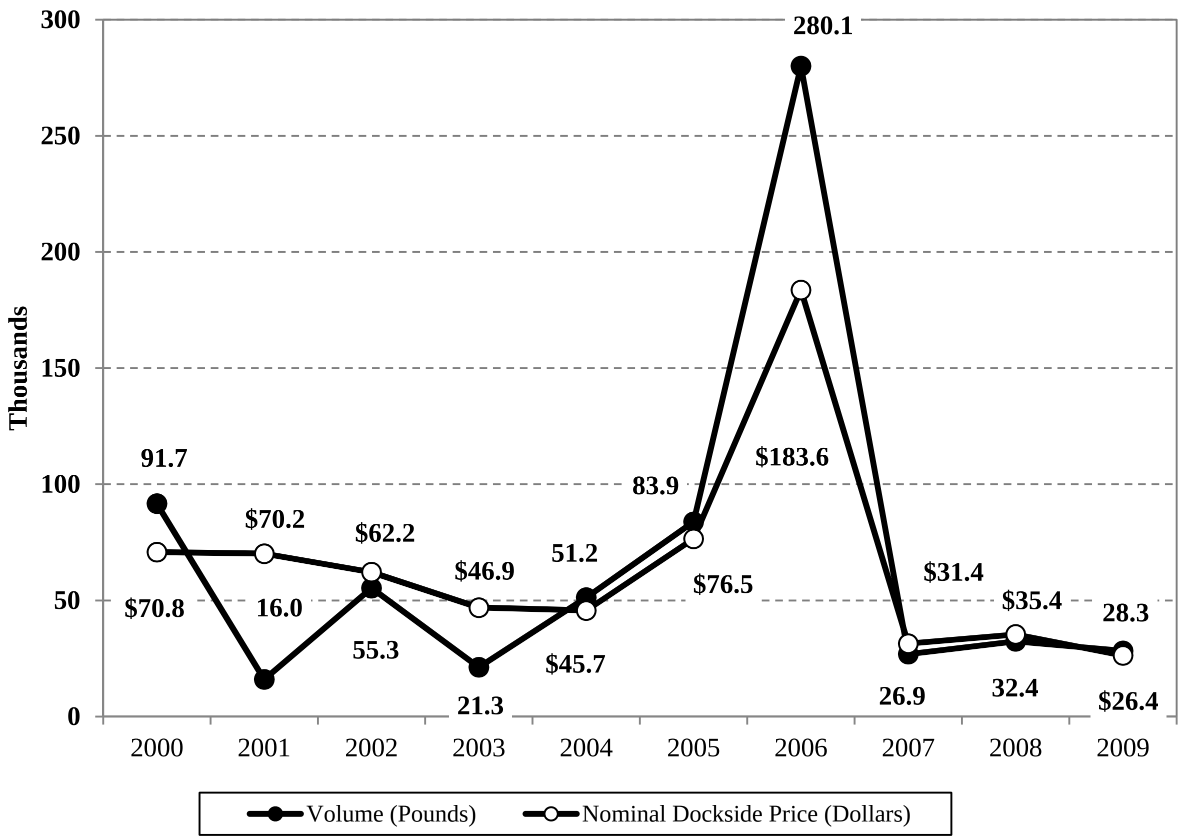


**Figure 5.12. Cumulative Volume and Dockside Value of Crabs Purchased by Active Resident Fresh Products Crab Dealers in Southeast Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

Volume per active resident fresh products dealer in southeast Louisiana (Figure 5.13) ranged between 1,119 pounds per dealer and 2,135 pounds per dealer between 2000 and 2004. Volume climbed to 4,193 per fresh products dealer in the hurricane year of 2005 and then doubled to 10,773 pounds per dealer in 2006. Volume per dealer was 1,416 pounds per dealer or less in every year between 2007 and 2009.

Dockside value per active resident fresh products dealer dropped from $5,396 per dealer in 2001 to $1,904 per dealer in 2004. Dockside value per dealer in this category doubled over the previous year's estimate to $3,827 per dealer in the hurricane year of 2005. It jumped to $7,093 per dealer in 2006. Dockside value per dealer among active resident fresh products dealers in southeast Louisiana fell to $1,653 per dealer in 2007, $1,474 per dealer in the hurricane year of 2008, and $1,318 per dealer in 2009.

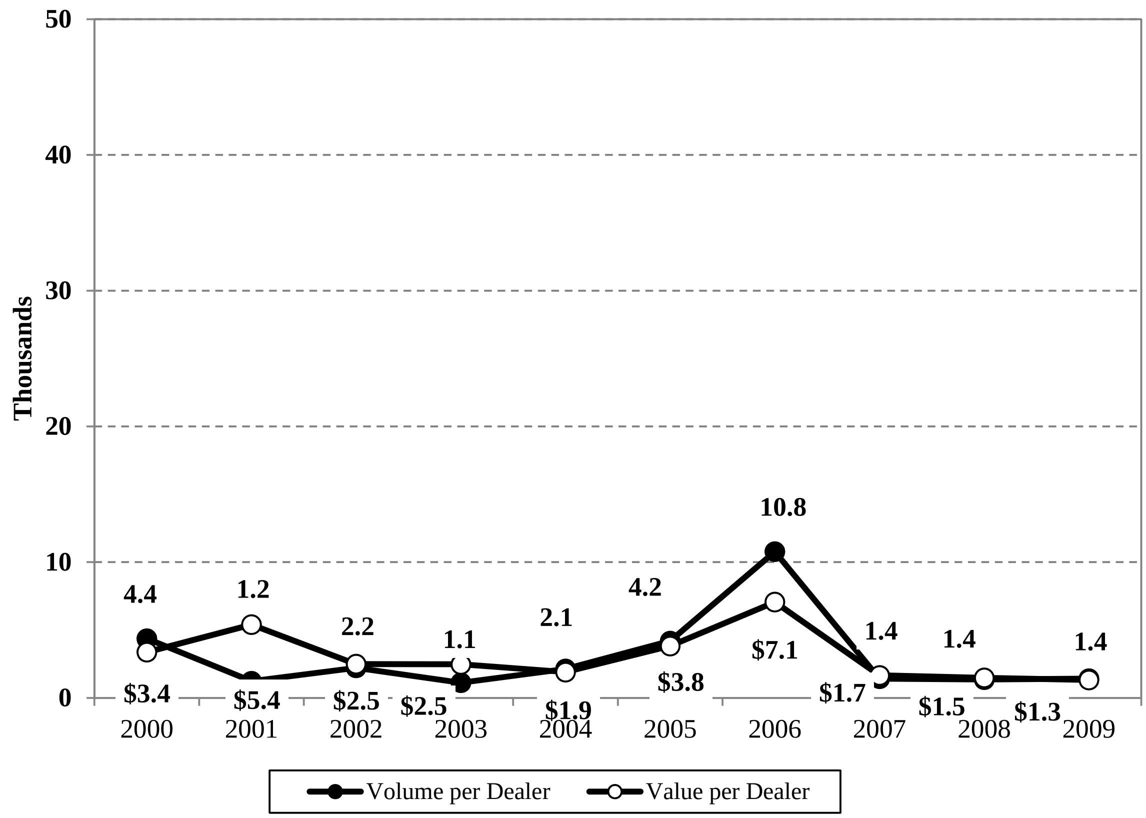


**Figure 5.13. Average Volume and Nominal Dockside Value per Active Resident Fresh Products Crab Dealer in Southeast Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

### 5.2.4. Active Resident Business Crab Dealers in Southwest Louisiana

In every year between 2000 and 2009, there were fewer active resident business crab dealers in southwest Louisiana than in southeast Louisiana. The number of active resident business crab dealers in southwest Louisiana varied from 114 in 2000 to 103 in 2001 to 117 in 2004. The number of such dealers fell to 106 in 2005 and 2006 (Figure 5.14). The number of active resident business crab dealers fell beneath 100 for every year from 2007 to 2009.

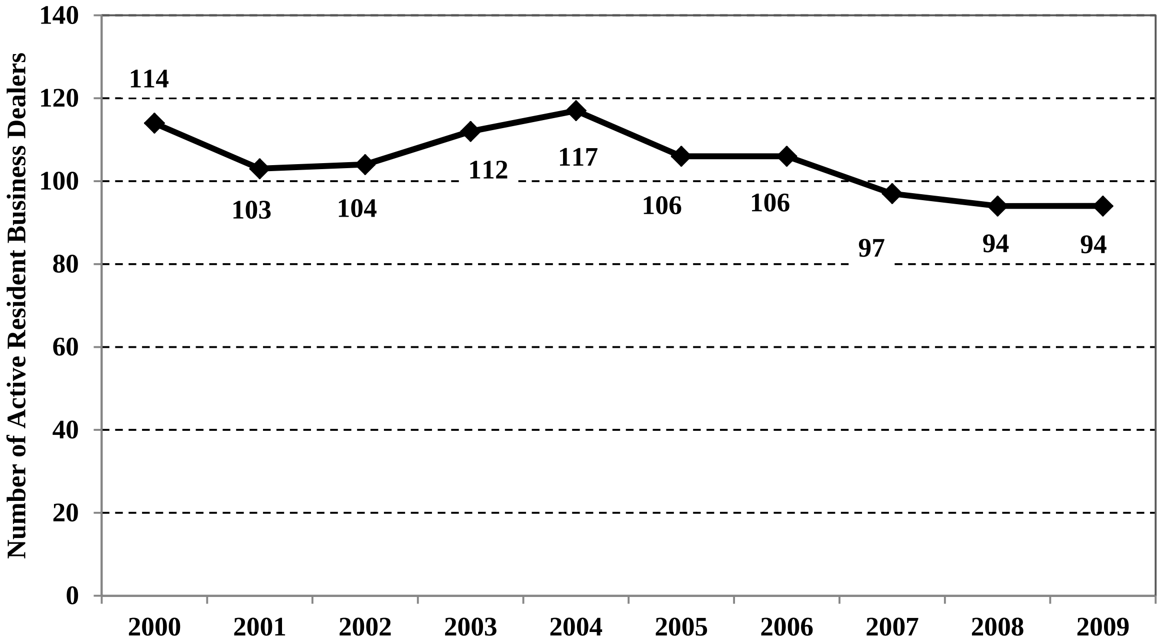


**Figure 5.14. Number of Active Resident Crab Business Dealers in Southwest Louisiana: 2000-2009**

The volume and dockside value of crabs purchased by active resident business crab dealers in southwest Louisiana (Figure 5.15) fell from 23.3 million pounds and $14.9 million in 2000 to 16.3 million pounds and $10.6 million in 2004. Volume and dockside value in the hurricane year of 2005 (17.0 million pounds and $11.4 million) were slightly higher than the measures for the previous year. Volume rose to 22.8 million pounds in 2006 then fell to 17.0 million pounds in the hurricane year of 2008 while dockside values for the same period remained approximately $13 million in every year between 2006 and 2008. Volume rose to 20.0 million pounds and dockside value to $14.3 million in 2009.

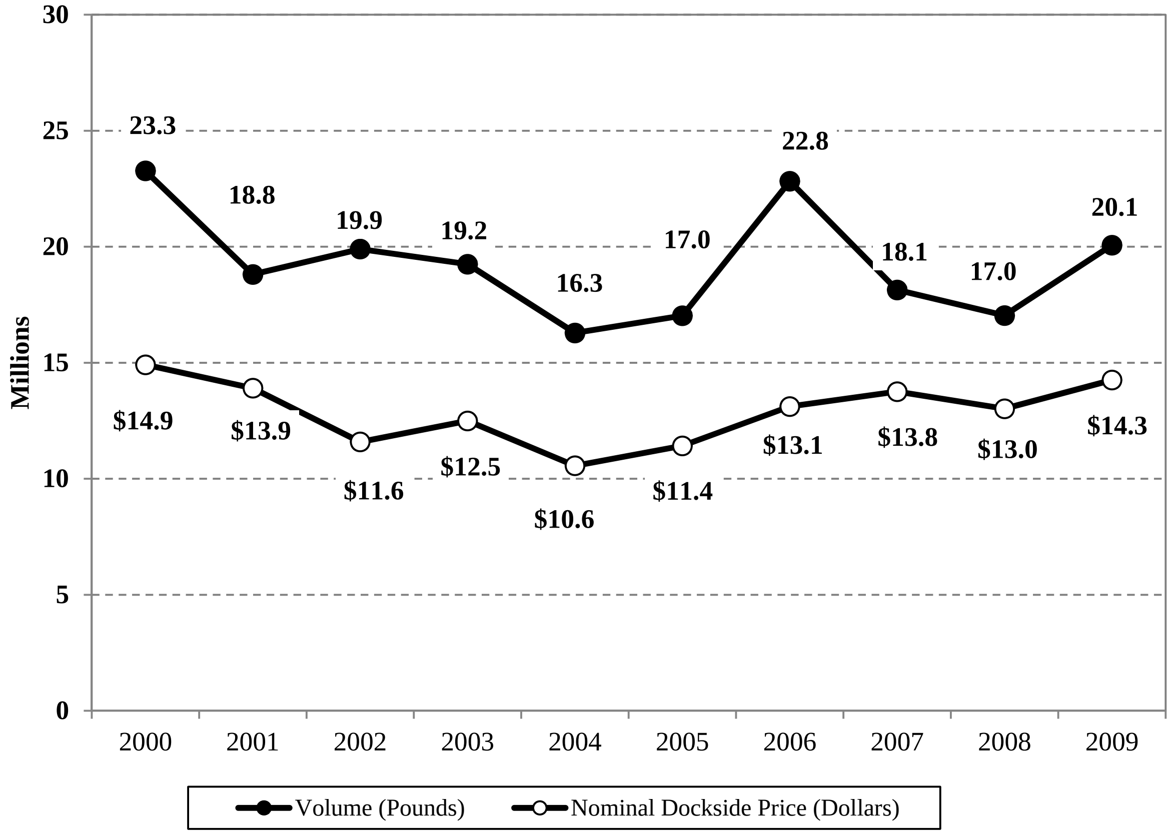


**Figure 5.15. Cumulative Volume and Dockside Value of Crabs Purchased by Active Resident Business Crab Dealers in Southwest Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

Both volume per active resident business crab dealer and dockside value of active resident business crab dealer exhibited a downward trajectory for the five years of the study timeframe before hurricanes Katrina and Rita (Figure 5.16). In the hurricane year of 2005, volume and dockside value rose to 161 thousand pounds per dealer and $108 thousand per dealer from 139 thousand pounds per dealer and $90 thousand pounds per dealer in the previous year. Volume reached a period peak of 215 thousand pounds in 2006 then declined to 181 thousand pounds per dealer in the hurricane year of 2008. Volume rose to 213 thousand pounds per dealer in 2009. Dockside value per resident business crab dealer in southwest Louisiana rose to a period maximum of $152 thousand per dealer in 2009.

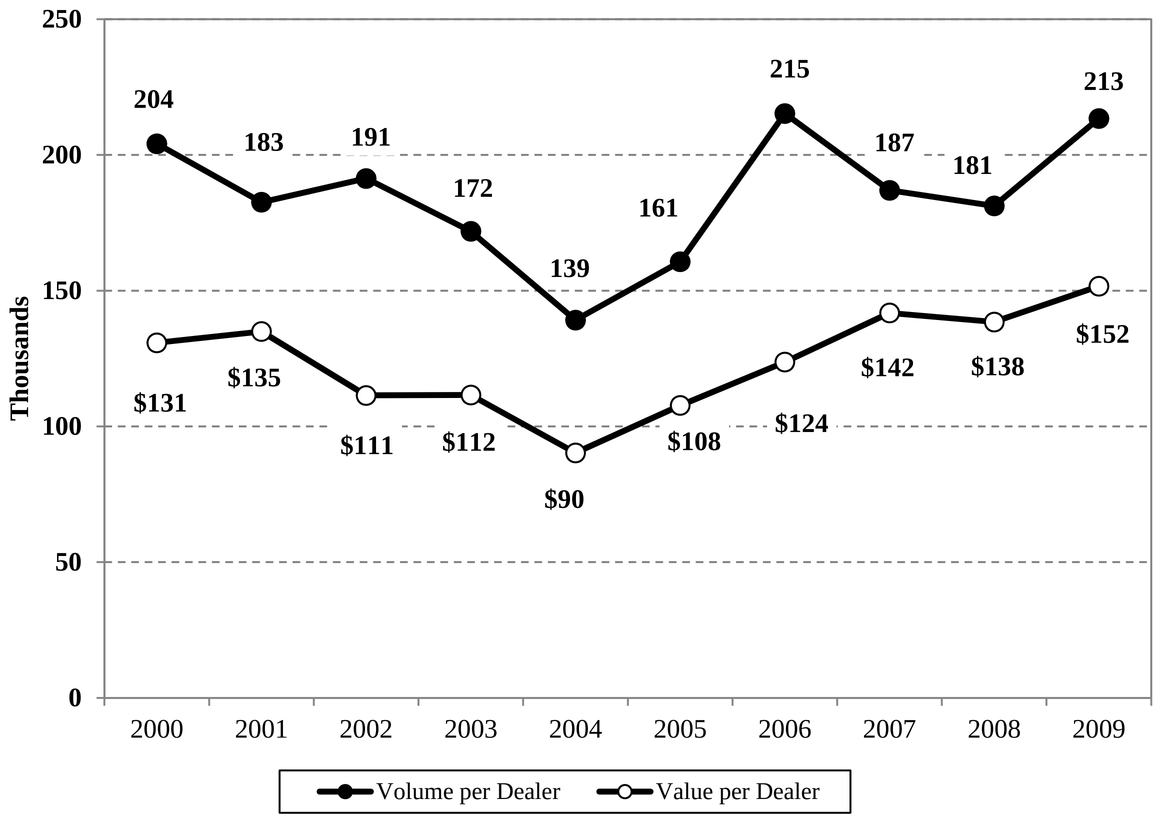


**Figure 5.16. Average Volume and Nominal Dockside Value per Active Resident Business Crab Dealer in Southwest Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

### 5.2.5. Active Resident Vehicle Crab Dealers in Southwest Louisiana

There were fewer than 12 active resident vehicle crab dealers in southwest Louisiana in every year within the study time frame. The number in every year between 2005 and 2008 was less than five which prevents a detailed description of dealers' activities in those years. The volume and dockside value of crabs purchased by dealers in this category had fallen from the 946 thousand to 1.5 million pound range (and $565 thousand to $1.1 million range) from 2000 to 2003 to only 514.8 thousand pounds and $333.3 thousand in 2004, the year before hurricanes Katrina and Rita (Table 5.1). Volume was only 58.7 thousand pounds and $39.4 thousand 2009 among active resident vehicle crab dealers in southwest Louisiana in 2009.

**Table 5.1. Volume and Dockside Value of Crabs Purchased by Active Resident Vehicle Crab Dealers in Southwest Louisiana: 2000 - 2009**

| Year | Number of Active Vehicle Crab Dealers | Volume (Pounds) | Dockside Value (Nominal Dollars) |
|---|---|---|---|
| 2000 | 10 | 946,531 | $564,859 |
| 2001 | 9 | 1,533,174 | $1,067,934 |
| 2002 | 8 | 1,355,172 | $762,270 |
| 2003 | 11 | 959,267 | $676,750 |
| 2004 | 8 | 514,750 | $333,290 |
| 2005 | 3 | * | * |
| 2006 | 4 | * | * |
| 2007 | 3 | * | * |
| 2008 | 2 | * | * |
| 2009 | 6 | 58,681 | $39,362 |

### 5.2.6. Active Resident Fresh Products Crab Dealers in Southwest Louisiana

The number of active resident fresh products crab dealers located in southwest Louisiana was larger than the number located in southeast Louisiana in each year in the study timeframe. The number in southwest Louisiana varied between 22 and 43 between 2000 and 2003 and stood at 39 in 2004, the year before hurricanes Katrina and Rita (Figure 5.17). The number of fresh products crab dealers in southwest Louisiana was 34 in the hurricane year of 2005 and then spiked to71 in 2006. The count dipped to 38 in the hurricane year of 2008 and then climbed to 66 in 2009.

Between 2000 and 2004, the volume of crabs reported by resident fresh products (Figure 5.18) dealers in southwest Louisiana varied between 73.7 thousand pounds and 141.5 thousand pounds. The volume in the hurricane year of 2005 was 93.3 thousand pounds. The measure reached 243.6 thousand pounds in 2006, declined to 150.4 thousand pounds in the hurricane year of 2008, and then rose to a period high of 319.4 thousand pounds in 2009. Dockside value among resident fresh products crab dealers in southwest Louisiana followed a similar pattern.

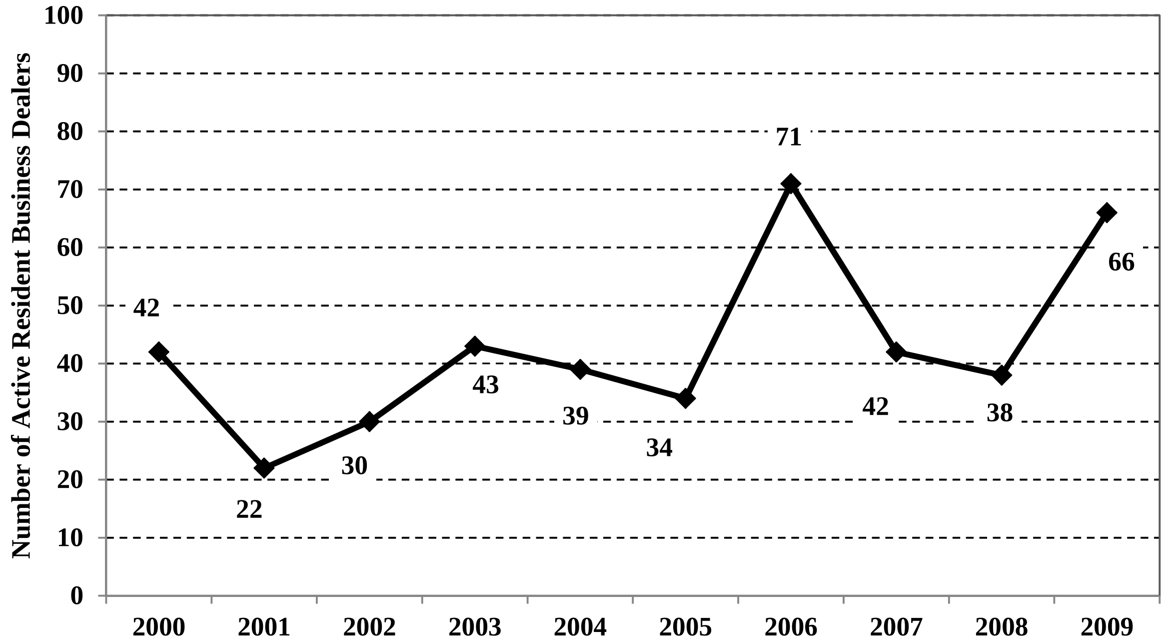


**Figure 5.17. Number of Active Resident Crab Fresh Products Dealers in Southwest Louisiana: 2000-2009**

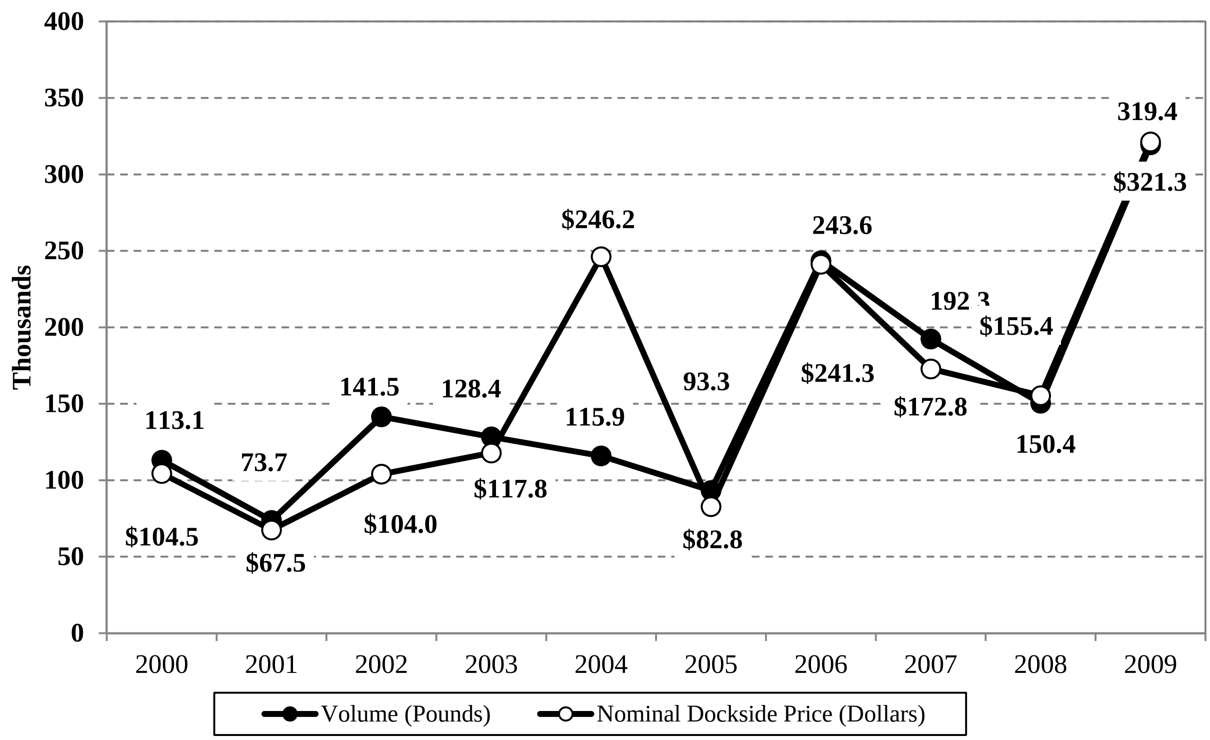


**Figure 5.18. Cumulative Volume and Dockside Value of Blue Crabs Purchased by Active Resident Blue Crab Fresh Products Dealers in Southwest Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

Volume per fresh products dealer (Figure 5.19) ranged between 2.7 thousand pounds per dealer and 4.7 thousand pounds per dealer between 2000 and 2004. Volume per dealer in this category in southwest Louisiana was 2.7 thousand pounds in the hurricane year of 2005. The measure then rose to 4.8 thousand pounds per resident fresh products dealer in southwest Louisiana in 2009.

Dockside value per resident fresh products dealer in southwest Louisiana (Figure 5.19) was at a period maximum of $6.3 thousand per dealer in 2004. This measure fell to $2.4 thousand per crab dealer in the hurricane year of 2005 and then commenced to rise to $4.9 per crab dealer among fresh products dealers in southwest Louisiana in 2009.

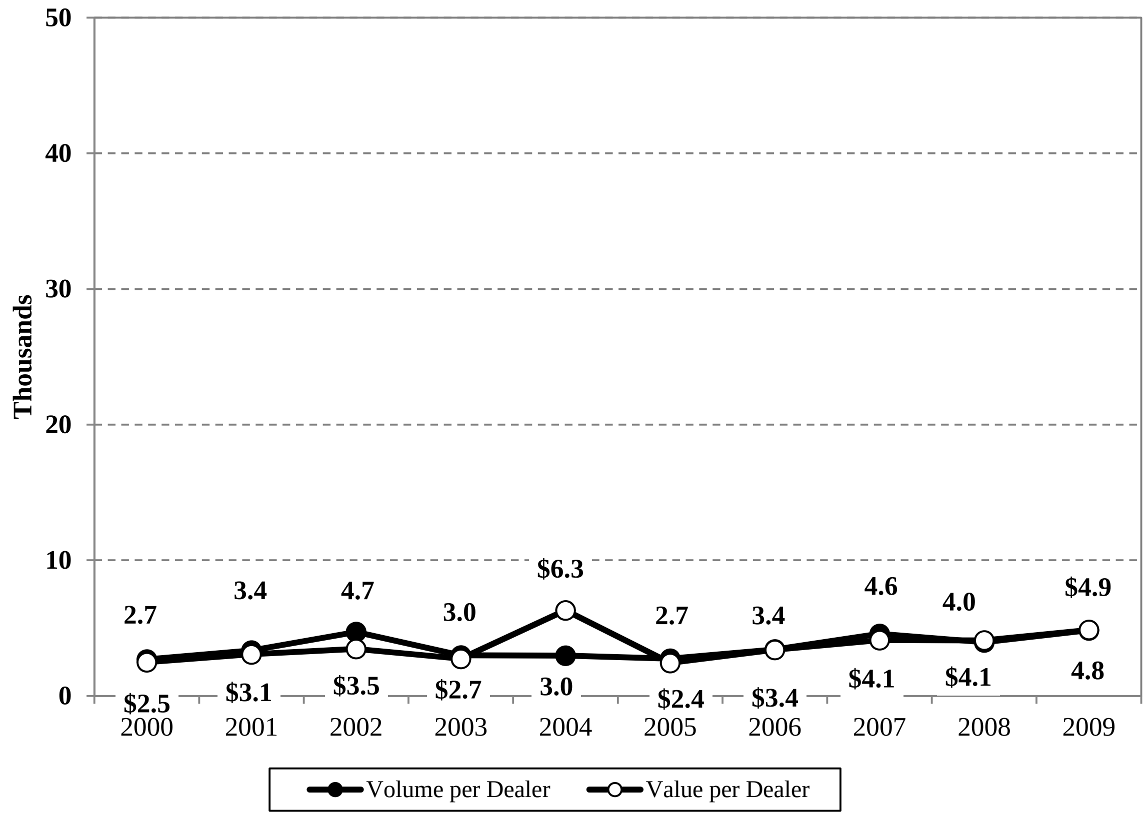


**Figure 5.19. Volume and Nominal Dockside Value per Active Resident Fresh Products Crab Dealer in Southwest Louisiana as Reported in Louisiana Trip Ticket Program: 2000 - 2009**

### 5.3. Percentage Changes in Active Blue Crab Dealer Numbers, Volume, and Dockside Value in Southeast and Southwest Louisiana Following Hurricanes Katrina and Rita

In several years after hurricanes Katrina and Rita, changes in the volume and dockside value of crabs purchased by crab dealers in southeast Louisiana displayed trends distinct from the changes observed among crab dealers in southwest Louisiana. In the hurricane year of 2005, volume and dockside value in southeast Louisiana were down 24.5 percent and 15.4 percent, respectively, below their 2004 levels. In southwest Louisiana in the same year, volume and dockside value were 2.5 percent and 4.9 percent above their 2004 estimates.

In 2006, volume and dockside value in both regions were above 2004 volume and dockside value. In 2007, however, volume and dockside value among southeast Louisiana dealers were again below their 2004 measures. In southwest Louisiana, volume and dockside value were again above the measures observed in 2004 in that region.

**Table 5.2. Change in Number of Dealers in the Southeast Louisiana in Specified Year as a Percentage of Number in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | 15.1% | **-7.1%** | **-12.7%** | **-9.4%** | -8.5% | -9.4% |
| | 2004 | | **-19.3%** | **-24.2%** | **-21.3%** | -20.5% | -21.3% |
| | 2005 | | | -6.1% | -2.5% | -1.5% | -2.5% |
| | 2006 | | | | 3.8% | 4.9% | 3.8% |
| | 2007 | | | | | **1.0%** | **0.0%** |
| | 2008 | | | | | | **-1.0%** |

**Table 5.3. Change in the Volume of Crabs Purchased by Crab Dealers in Southeast Louisiana in Specified Year as a Percentage of Volume in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | 3.9% | **-21.6%** | **12.8%** | **0.0%** | 2.3% | 21.1% |
| | 2004 | | **-24.5%** | **8.5%** | **-3.8%** | -1.5% | 16.5% |
| | 2005 | | | 43.8% | 27.5% | 30.4% | 54.4% |
| | 2006 | | | | -11.3% | -9.3% | 7.4% |
| | 2007 | | | | | **2.3%** | **21.1%** |
| | 2008 | | | | | | **18.4%** |

**Table 5.3. Change in the Dockside Value of Crabs Purchased by Crab Dealers in Southeast Louisiana in Specified Year as a Percentage of Dockside Value in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | 1.5% | **-14.1%** | **0.3%** | **13.2%** | 13.9% | 19.5% |
| | 2004 | | **-15.4%** | **-1.2%** | **11.5%** | 12.2% | 17.7% |
| | 2005 | | | 16.8% | 31.8% | 32.6% | 39.1% |
| | 2006 | | | | 12.9% | 13.6% | 19.1% |
| | 2007 | | | | | **0.6%** | **5.5%** |
| | 2008 | | | | | | **4.9%** |

### 5.4. Percentage Changes in Active Blue Crab Dealer Numbers, Volume, and Dockside Value in Southeast and Southwest Louisiana Following Hurricanes Gustav and Ike

Following Gustav and Ike, volume and dockside value among crab dealers in southeast Louisiana in the hurricane year of 2008 were a moderate 2.3 percent and 0.6 percent higher, respectively, than their 2007 levels. Volume in 2009 was 21.1 percent above 2007 volume and dockside value was 5.5 percent above 2007 dockside value.

Volume and dockside value among dealers in southwest Louisiana in the hurricane years were down 5.6 percent and 6.3 percent, respectively, below their 2007 measures. In the following year, the volume and dockside values of crabs purchased by crab dealers in southwest Louisiana were 11.4 percent and 4.9 percent greater than volume and dockside value in 2007.

**Table 5.4. Change in the Number of Active Crab Dealers in the Southwest Louisiana in Specified Year as a Percentage of Number in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | 5.8% | **-7.7%** | **17.4%** | **-8.4%** | -13.5% | 7.1% |
| | 2004 | | **-12.8%** | **11.0%** | **-13.4%** | -18.3% | 1.2% |
| | 2005 | | | 27.3% | -0.7% | -6.3% | 16.1% |
| | 2006 | | | | -22.0% | -26.4% | -8.8% |
| | 2007 | | | | | **-5.6%** | **16.9%** |
| | 2008 | | | | | | **23.9%** |

**Table 5.6. Change in the Volume of Crabs Purchased by Crab Dealers in Southwest Louisiana in Specified Year as a Percentage of Volume in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | -18.2% | **-16.1%** | **11.8%** | **-11.3%** | -16.9% | -1.1% |
| | 2004 | | **2.5%** | **36.7%** | **8.4%** | 1.6% | 20.8% |
| | 2005 | | | 33.3% | 5.7% | -0.9% | 17.8% |
| | 2006 | | | | -20.7% | -25.7% | -11.6% |
| | 2007 | | | | | **-6.3%** | **11.4%** |
| | 2008 | | | | | | **18.9%** |

**Table 5.7. Change in the Dockside Value of Crabs Purchased by Crab Dealers in Southwest Louisiana in Specified Year as a Percentage of Dockside Value in Various Base Years**

| | | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|
| Base Years | 2000-2004 Average | -17.5% | **-13.5%** | **-0.4%** | **3.2%** | -2.4% | 8.3% |
| | 2004 | | **4.9%** | **20.8%** | **25.1%** | 18.3% | 31.2% |
| | 2005 | | | 15.2% | 19.3% | 12.8% | 25.1% |
| | 2006 | | | | 3.6% | -2.1% | 8.6% |
| | 2007 | | | | | **-5.5%** | **4.9%** |
| | 2008 | | | | | | **10.9%** |

# Chapter 6
# Summary and Findings

## 6.1 Introduction

In 2005, landfall of Hurricane Katrina and Rita resulted in widespread damage throughout much of south eastern and south western costal parts of Louisiana. According to a report released by NOAA (2007c), losses to Louisiana seafood industry were estimated at $1.3 billion (annual total retail value). Even as Louisiana was still recovering from the impact of storms from 2005, Hurricane Gustav and Ike made landfall in Louisiana in September 2008 as category two[1] storms and inflicted significant damage across broad swaths of Louisiana.

The devastating impacts of the storms led to the declaration of fishery disaster relief funds, both in 2005 and 2008 (GSMFC, 2008) and hence, NMFS has been partnering with state agencies to conduct hurricane-related damage and impact assessments. As part of an ongoing effort, to monitor the recovery process, this report focused on fisheries trends from 2000 to 2009, but caution should be applied about making causal linkages between the hurricanes and fishery trends. Before the storms in 2005, the fisheries sector was already affected by a complex mix of socioeconomic problems causing a regional trend of decline in fishery participation and production. This trend was influenced by high fuel costs, poor market prices for domestic shrimp, fishery overcapitalization, rising insurance costs, and the erosion and conversion of waterfront property in some areas from fishing industry use to tourism-based uses (NOAA, 2007c). All of these factors still affect the fisheries today, and therefore make it difficult to fully understand the impacts of the hurricanes on Louisiana fisheries.

The study uses trip-ticket data and licensing data to track purchases by individual dealers pre- and post-hurricane to analyze changes in purchases of crab landings in Louisiana.  The next few sections summarize the key findings related to crab purchases from 2000 to 2009.

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[1] Tropical Weather Summary". National Hurricane Center. Website Accessed on December 9, 2010. http://www.nhc.noaa.gov/archive/2008/tws/MIATWSAT_nov.shtml

### 6.2 Overall Crab Purchases and Dealer Distribution by Volume

Crab purchases by volume and value had declined by more than 8 percent from 2004 levels when hurricane Katrina and Rita hit Louisiana in 2005. Since 2006, there has been a fluctuating recovery. But in 2009, increases in volume (by 20 percent) and value (by 8 percent) of crab purchases not only surpassed pre Katrina levels, but also marked the highest amounts of crab purchases in the last 10 year history of crab harvests in Louisiana.

Analyzing the distribution of dealers buying crab in 8 different categories (by pounds) varying from 0 to 5000 pounds, 5000 to 10,000 pounds, 10,000 to 20,000 pounds, 20,000 to 50,000 pounds, 50,000 to100, 000 pounds, 100,000 to 500,000 pounds, 500,000 to 1,000,000 pounds and above 1,000,000 pounds, it was found that approximately two fifths of the dealers buying crabs in Louisiana fall in the category 0 to 5000 pounds. Except for 2001, 2005, 2007and 2008, the number of dealers in this category has been increasing from 2000-2009. Number of dealers buying crabs in category 100,000-500,000 pounds varies from 7 to 11 percent throughout 2000 to 2009. A trend of decline in number of dealers and crab purchases was noticed for the category 'more than 1000,000 pounds' in 2007 and through 2008 (when hurricane Gustav and Ike hit Louisiana). However, in 2009, there is a marked improvement with an increase of more than 70 percent in number of dealers and more than 40 percent increase in crab purchases by volume (26 million pounds) and value ($17 million).

### 6.3 Overall Crabs Purchases

Ninety nine percent of crabs harvested in Louisiana are blue crabs. Hence, we focus only on summary conclusions for blue crabs. Blue crab purchases by volume and value present a fluctuating trend from 2000 to 2009. After going through another period of decline from 2007 through 2008 (when hurricane Gustav and Ike hit Louisiana) purchases of crab landings both by volume and value in 2009 mark the highest levels of dock side crab purchases in the last 10 years.

#### 6.3.1 Blue Crabs: Number of Dealers by License Type

The following section focuses on number of dealers, blue crab landings bought by dealers with different license categories to further highlight the distribution of dealers depending on the kind of whole/retail dealer license.

Number of dealers with wholesale/retail business license has been declining from 265 in 2000 to 223 in 2009. In fact 2004 (300) witnessed the maximum number of dealers with wholesale/retail-business license buying blue crabs in the last 10 year and 2005 saw the steepest decline (15 percent) in the number of wholesale/retail-business dealers. There has been an increase in the number of dealers with wholesale/retail and fresh products licenses from 2000 to 2009 with their numbers in 2009 being higher than pre-Katrina and pre-Gustav levels.

### 6.3.2 Blue Crab: Volume and Value of Purchases by License Type

There was a major decline in crab purchases by volume (down 15 percent at 35 million pounds) and value (down 7 percent at $25 million) for dealers with wholesale/retail business license in 2005 with a fair degree of recovery in 2006 (47 million pounds valued at $28 million). However, 2009 recorded the highest docksides purchases by volume and value for dealers with wholesale/retail business license (48 million pounds valued at $33 million). Other licenses (mainly fresh product and wholesale/retail-vehicle licenses) also displayed an increase in the amount of blue crab purchases in 2009 indicating a recovery from hurricane Katrina and Rita in 2005 and hurricanes Gustav and Ike in 2008.

## 6.4 Regional Analysis

Based on parishes affected in Hurricane Katrina and Rita storms of 2005, Louisiana is divided into three regions:

a) Southeast Louisiana which was mainly affected by hurricane Katrina in 2005 includes the following parishes--Orleans, Jefferson, Plaquemines, St. Bernard, St. Tammany, Lafourche, Tangipahoa, Livingston, Ascension, St. John the Baptist, St. Charles, and St James.

b) Southwest Louisiana which was mainly affected by Hurricane Rita in 2005 includes the following parishes-- Assumption, Pointe Coupee, Iberville, Acadia, Avoyelles, Terrebonne, St. Mary, Iberia, St. Martin, Jefferson Davis, Vermilion, Calcasieu, Cameron, and Lafayette.

c) Rest of Louisiana which was not affected by any of the hurricanes in 2005 includes dealer purchases from other parishes in Louisiana and out of state parishes.

The following section summarizes the findings for each of region in terms of number of dealers and volume and value of crab purchased by license types.

### 6.5 Southwest Louisiana: Overall Purchases

Although the volume and value of crab purchases in southwest Louisiana in 2009 (20 million pounds valued at $15 million) is higher than the pre-Katrina (17 million pounds valued at $11 million) levels in 2004 and pre-Gustav levels (18 million pounds valued at $14 million) in 2007, it has suffered a decline 17 percent decline by volume and 6 percent decline by value since 2000 (24 million pounds valued at $16 million).

#### 6.5.1 Southwest Louisiana: Number of Dealers by License Type

In terms of number of dealers, wholesale/ retail business license dealers display a slow and steady declining trend from 2000(114 dealers) to 2009 (94 dealers), especially after hurricane Katrina and Rita in 2005(106), whereas dealers operating with a fresh products license display a widely fluctuating trend, but with an overall increasing trend in their numbers after the hurricanes in 2005 (34 dealers in 2005 to 71in 2006) and 2008 (38 in 2008 to 66 in 2009). As a result, over a period of 10 years (from 2000 to 2009), number of dealers with wholesale/retail business license have declined by approximately 18 percent and fresh product dealers have increased by 57 percent.

### 6.5.2 Southwest Louisiana: Volume and Value of Purchases by License Type

In 2009, both the crab purchases by volume and value (20 million pounds valued at $14 million) by dealers with wholesale retail business license increased by 17 percent and 9 percent from 2008(17 million pounds valued at $13 million) levels. Combining the trend from number of dealers and overall crab purchases by volume, it can be concluded, that there is an increase in average crab purchases per dealer from 2000 to 2009 and average crab purchases were not affected in 2005 (hurricane Katrina and Rita year), though they  suffered minor declines when Hurricane Gustav and Ike hit Louisiana in 2008.

Volume and value of crab purchases by dealers with wholesale/retail vehicle in southwest Louisiana license exhibit an overall declining trend from 2000 (947 thousand pounds valued at $565 thousand ) to 2009 (59 thousand pounds valued at$39 thousand). An opposite trend of an overall increase in volume and value of crab purchases, is however, visible for dealers with fresh products license .Volume and value of crab purchases declined by 22 percent and 66 percent in 2005 (when hurricane Katrina and Rita hit Louisiana), but more than doubled in 2006, indicating recovery from the hurricanes. In 2009, fresh product dealer's purchases again more than doubled from their levels in 2008 when hurricane Gustav and Ike hit Louisiana.

## 6.6 Southeast Louisiana: Overall Crab Purchases

Both volume and value of crab purchases in Southeast Louisiana display a fluctuating and overall increasing trend, especially after Hurricanes Katrina and Rita in 2005, when overall crab purchases by volume and value had declined by 25 percent and 15 percent from their 2004 levels. By 2006, both volume and value of crab purchases returned to the pre-Katrina levels at 30 million pounds and valued at $18 million. In 2009, crab purchases stood at 32 million pounds valued at $22 million --one of highest levels of crab purchases by volume and value in last 10 years.

### 6.6.1 Southeast Louisiana: Number of Dealers by License Type

The number of dealers with wholesale/retail business license display a declining trend from 2000 (147 dealers) to 2009 (128 dealers) especially since 2005 (when hurricane Katrina and Rita hit Louisiana) but a stable trend can be seen since 2007. The number of dealers with wholesale/retail vehicle license and fresh product license follow a r fluctuating trend till 2005 with an overall decline in number of dealers purchasing crabs when hurricane Katrina and Rita hit Louisiana. But after 2006, contrasting trends emerge for these two license categories -- dealers having wholesale/retail vehicle license witnessed an overall increase of 35 percent but dealers with fresh product license suffered a decline of 23 percent in their overall numbers from 2006 to 2009

### 6.6.2 Southeast Louisiana: Volume and Value of Purchases by License Type

The trend for volume and value of crab purchases by wholesale/retail business dealer license displays an increasing trend, except for steep decline in 2005 (volume and value declined by 28 percent and 17 percent) when hurricane Katrina and Rita hit Louisiana. However, purchases bounced back to pre-Katrina levels in 2006 (crab purchases by volume increased by37 percent and value by 9 percent). In 2009, crab purchases reached a record high of 28 million pounds valued at $19 million—one of the highest levels for the last 10 years. The average crab purchases per dealer for this license has increased from 171 thousand pounds valued at $114 thousand in 2000 to 216 thousand pounds valued at $146 thousand in 2009 ( an increase of 26 percent by volume and 28 percent by value). It’s interesting to note, that despite the decline in number of dealers from 2000 to 2009 (Figure 3.8) with wholesale/retail business license, total volume and value of crab purchases has been increasing from 2000 to 2009. As a result the average volume and value per dealer has also increased indicating concentration in crab industry with wholesale retail dealer license. Figures also point towards an overall increasing trend for volume and value of crab purchases by dealers with wholesale/retail vehicle license from 2000 to 2009 in Southeast Louisiana and an increase in average purchase per dealer from 2000 to 2009. Regarding, dealers with fresh product dealer license, purchases have been on a declining trend except (when hurricane Katrina and Rita hitting Louisiana) in 2005, purchases by volume and value increased by more than 60 percent and reached a high of 280 million pounds valued at $184 million in 2006.

### 6.7 Conclusion and Future Studies

Available information and data sources analyzed in this study till 2009 indicate that Louisiana crab fisheries have been recovering well from the hurricanes with 2009 (53 million pounds valued at$37 million) recording highest levels of purchases in terms of volume and value, and all the regions have archived pre-hurricane levels of crab harvests.

There has been an overall decline in number of dealers buying dockside volume pointing towards consolidation in crab industry. However, to achieve a more concrete and clearer picture, scientists and researchers need to continue analyzing long-term fishery-independent survey data to study trends and factors affecting volume and value of crab in Louisiana coastal waters. Further work and research is needed to better understand the effects of environmental (hurricanes) and economic factors on the crab industry, so as to develop healthy and resilient Louisiana fisheries and fishing communities over the long term.

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# Appendix A

**Table A.1. Volume and Dockside Value of Crabs Purchased by Commercial Seafood Dealers in Louisiana: 2000- 2009**

**Table A.2. Number of Commercial Seafood Dealers Reporting Crab Purchases in Louisiana, By Selected License Type, By Year: 2000-2009**

**Table A.3. Cumulative Volume of Crabs Purchased by Commercial Seafood Dealers Reporting Crab Purchases in Louisiana, By Selected License Type, By Year: 2000-2009**

**Table A.4. Cumulative Dockside Value of Crabs Purchased by Commercial Seafood Dealers Reporting Crab Purchases in Louisiana, By Selected License Type, By Year: 2000-2009**

**Table A.1. Volume and Dockside Value of Crabs Purchased by Commercial Seafood Dealers in Louisiana: 2000- 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Volume | 52,025,111 | 41,785,558 | 50,086,558 | 48,045,167 | 44,355,808 | 38,052,304 | 52,025,111 | 44,775,293 | 44,282,885 | 52,926,968 |
| Dockside Value | $34,514,591 | $32,031,706 | $30,653,664 | $33,618,609 | $29,940,562 | $27,589,630 | $32,224,280 | $34,871,328 | $34,319,052 | $37,164,586 |

**Table A.2. Number of Commercial Seafood Dealers Reporting Crab Purchases in Louisiana, By Selected License Type, By Year: 2000-2009**

| Calendar Year Licenses | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Resident Wholesale/Retail -- Business | 515 | 514 | 526 | 561 | 578 | 529 | 444 | 470 | 461 | 467 |
| Resident Wholesale/Retail -- Vehicle | 62 | 59 | 69 | 95 | 94 | 80 | 76 | 82 | 71 | 98 |
| Non-Res. Wholesale/Retail Dealer -- Business | 16 | 18 | 15 | 17 | 18 | 12 | 11 | 10 | 16 | 15 |
| Non-Resident Wholesale/Retail Dealer -- Vehicle | 10 | 10 | 12 | 10 | 11 | 8 | 5 | 8 | 8 | 7 |
| Resident Fresh Products | 240 | 156 | 236 | 346 | 403 | 297 | 438 | 412 | 346 | 466 |
| Others | 46 | 20 | 19 | 24 | 28 | 22 | 14 | 6 | 11 | 11 |
| Total Active Crab Dealers | 889 | 777 | 877 | 1053 | 1132 | 948 | 988 | 988 | 913 | 1064 |

**Source: LDWF Licensing Database**

**Table A.3. Cumulative Volume of Crabs Purchased by Commercial Seafood Dealers Reporting Crab Purchases in Louisiana, By Selected License Type, By Year: 2000-2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Class Code | | | | | | | | | | |
| Resident Wholesale/Retail-Business | 1,321,741,927 | 1,072,657,227 | 1,296,334,281 | 1,168,520,041 | 1,081,522,885 | 833,738,983 | 959,257,633 | 985,043,249 | 917,464,354 | 989,442,114 |
| Resident Wholesale/Retail-Vehicle | 5,629,793 | 6,857,968 | 7,320,898 | 5,296,219 | 7,504,502 | 7,678,665 | 6,266,177 | 6,065,277 | 5,704,543 | 7,458,655 |
| Non-Resident Wholesale/Retail-Business | 2,192,610 | 3,697,486 | 3,801,463 | 3,561,811 | 2,977,516 | 2,285,282 | 3,272,284 | 3,242,634 | 3,271,577 | 3,330,455 |
| Non-Resident Wholesale/Retail-Vehicle | 2,139,918 | 1,889,197 | 2,025,516 | 2,006,061 | 1,906,725 | 1,469,555 | 1,405,120 | 1,178,721 | 926,986 | 1,425,173 |
| Resident Fresh Products | 478,494 | 421,775 | 513,067 | 907,348 | 1,262,826 | 1,205,272 | 1,940,327 | 1,357,586 | 1,160,443 | 1,807,253 |
| Others | 901,283 | 36,336 | 31,009 | 102,336 | 31,698 | 83,292 | 59,673 | 81,684 | 279,472 | 51,797 |

**Table A.4.** **Cumulative Dockside Value of Crabs Purchased by Commercial Seafood Dealers Reporting Crab Purchases in Louisiana, By Selected License Type, By Year: 2000-2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Class Code | | | | | | | | | | |
| Resident Wholesale/Retail- Business | $376,745,667 | $308,303,746 | $263,422,862 | $254,571,148 | $257,291,195 | $233,727,232 | $252,975,233 | $272,169,690 | $270,107,549 | $263,122,600 |
| Resident Wholesale/Retail- Vehicle | $6,173,754 | $6,607,039 | $5,573,525 | $5,024,370 | $7,377,967 | $8,545,363 | $5,869,314 | $6,213,505 | $5,947,121 | $7,474,820 |
| Non -Resident Wholesale/Retail-Business | $4,395,879 | $6,649,432 | $7,371,315 | $6,464,642 | $5,670,085 | $4,479,882 | $6,955,094 | $7,766,533 | $8,650,141 | $8,550,737 |
| Non -Resident Wholesale/Retail-Vehicle | $3,655,695 | $3,249,582 | $3,097,999 | $3,629,390 | $3,162,615 | $2,580,656 | $1,755,115 | $1,104,509 | $1,152,117 | $1,422,798 |
| Resident Fresh Products License | $582,677 | $614,300 | $642,121 | $1,427,586 | $1,823,416 | $1,752,194 | $3,108,143 | $2,057,587 | $1,989,797 | $3,071,801 |
| Others | $727,286 | $63,480 | $51,488 | $129,365 | $76,917 | $216,192 | $44,950 | $103,282 | $437,481 | $87,603 |

# Appendix B

**Table B.1 Number of Dealers Buying Crabs in Different Crab Volume Categories: 2000-2009**

**Table B.2 Cumulative Volume of Crabs Purchased by Dealers in Different Crab Volume Categories: 2000-2009**

**Table B.3. Cumulative Dockside Value of Crabs Purchased by Dealers in Different Crab Volume Categories: 2000-2009**

**Table B.1** **Number of Dealers Buying Crabs in Different Crab Volume Categories: 2000-2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-5,000 | 177 | 142 | 168 | 193 | 211 | 175 | 181 | 155 | 152 | 153 |
| 5,000-10,000 | 42 | 45 | 46 | 38 | 44 | 32 | 35 | 36 | 37 | 40 |
| 10,000-20,000 | 46 | 36 | 39 | 51 | 47 | 40 | 42 | 38 | 36 | 45 |
| 20,000-50,000 | 47 | 40 | 39 | 42 | 46 | 33 | 42 | 39 | 35 | 44 |
| 50,000-100,000 | 22 | 14 | 16 | 24 | 26 | 19 | 20 | 12 | 16 | 14 |
| 100,000-500,000 | 44 | 38 | 37 | 32 | 33 | 33 | 28 | 23 | 32 | 39 |
| 500,000-1,000,000 | 18 | 16 | 17 | 19 | 12 | 13 | 18 | 25 | 23 | 19 |
| Above 1,000,000 | 13 | 12 | 17 | 13 | 16 | 14 | 19 | 12 | 10 | 17 |
| Total Dealers | 409 | 343 | 379 | 412 | 435 | 359 | 385 | 340 | 341 | 371 |

**Table B.2 Cumulative Volume of Crabs Purchased by Dealers in Different Crab Volume Categories: 2000-2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-5,000 | 208,859 | 230,290 | 259,287 | 313,564 | 282,173 | 247,088 | 251,286 | 218,275 | 215,251 | 194,249 |
| 5,000-10,000 | 299,360 | 326,369 | 327,597 | 268,986 | 340,158 | 219,838 | 264,032 | 250,960 | 266,843 | 303,363 |
| 10,000-20,000 | 691,832 | 552,904 | 571,767 | 750,832 | 680,521 | 583,563 | 590,470 | 548,094 | 498,827 | 654,019 |
| 20,000-50,000 | 1,531,265 | 1,271,214 | 1,250,010 | 1,335,068 | 1,456,578 | 1,052,821 | 1,380,676 | 1,255,967 | 1,113,382 | 1,443,024 |
| 50,000-100,000 | 1,563,806 | 954,418 | 1,157,862 | 1,694,187 | 1,895,530 | 1,247,868 | 1,442,357 | 870,320 | 1,100,014 | 1,034,643 |
| 100,000-500,000 | 10,193,609 | 9,853,519 | 8,643,920 | 7,753,484 | 9,590,174 | 8,209,732 | 6,964,712 | 4,911,394 | 8,660,176 | 10,122,919 |
| 500,000-1,000,000 | 12,569,270 | 11,855,622 | 13,104,176 | 15,210,320 | 8,724,374 | 8,899,322 | 11,831,600 | 18,256,023 | 16,079,879 | 12,946,332 |
| Above 1,000,000 | 24,967,097 | 16,741,211 | 24,771,930 | 20,718,710 | 21,386,287 | 17,592,068 | 30,589,012 | 18,464,259 | 16,348,509 | 26,228,413 |

**Table B.3. Cumulative Dockside Value of Crabs Purchased by Dealers in Different Crab Volume Categories: 2000-2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0-5,000 | $277,105 | $307,411 | $315,140 | $414,083 | $500,229 | $337,816 | $319,773 | $374,747 | $280,269 | $254,378 |
| 5,000-10,000 | $287,480 | $460,764 | $394,348 | $335,901 | $523,717 | $238,577 | $298,705 | $273,701 | $301,446 | $332,324 |
| 10,000-20,000 | $822,098 | $635,238 | $538,270 | $798,986 | $744,878 | $860,438 | $626,303 | $655,829 | $549,964 | $758,705 |
| 20,000-50,000 | $1,460,393 | $1,240,408 | $1,271,453 | $1,294,885 | $1,331,218 | $911,555 | $1,235,688 | $1,290,812 | $1,225,465 | $1,507,301 |
| 50,000-100,000 | $1,110,449 | $900,338 | $927,205 | $1,563,744 | $1,630,022 | $1,062,156 | $1,286,459 | $878,912 | $1,219,061 | $814,186 |
| 100,000-500,000 | $6,368,170 | $7,022,884 | $5,136,108 | $5,104,469 | $5,733,153 | $5,856,374 | $4,476,011 | $3,629,116 | $6,516,433 | $7,144,414 |
| 500,000-1,000,000 | $8,462,020 | $9,306,565 | $7,987,879 | $10,728,788 | $6,585,578 | $6,702,731 | $6,792,945 | $14,321,371 | $12,278,816 | $9,143,326 |
| Above 1,000,000 | $15,726,876 | $12,158,097 | $14,083,261 | $13,377,754 | $12,891,767 | $11,619,982 | $17,188,396 | $13,446,840 | $11,947,598 | $17,209,953 |

## Appendix C.

**Table C.1. Number of Active Blue Crab Dealers, Volume, Dockside Vale, and Average Dockside Price per Pound of Blue Crabs in Louisiana: 2000 to 2009**

**Table C.2. Number of Active Stone Crab Dealers, Volume, Dockside Vale, and Average Dockside Price per Pound of Stone Crabs in Louisiana: 2000 to 2009**

**Table C.1. Number of Active Blue Crab Dealers, Volume, Dockside Vale, and Average Dockside Price per Pound of Blue Crabs in Louisiana: 2000 to 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Active Dealers | 407 | 340 | 377 | 410 | 433 | 359 | 385 | 340 | 341 | 370 |
| Volume | 51,975,107 | 41,759,142 | 50,078,595 | 48,032,898 | 44,354,158 | 38,051,670 | 53,312,530 | 44,771,048 | 44,280,457 | 52,925,243 |
| Dockside Value | $34,402,536 | $31,975,345 | $30,636,881 | $33,575,608 | $29,936,781 | $27,587,913 | $32,220,146 | $34,859,924 | $34,311,475 | $37,159,956 |
| Price per Pound | $0.66 | $0.77 | $0.61 | $0.70 | $0.67 | $0.73 | $0.60 | $0.78 | $0.77 | $0.70 |

**Table C.2. Number of Active Stone Crab Dealers, Volume, Dockside Vale, and Average Dockside Price per Pound of Stone Crabs in Louisiana: 2000 to 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Active Dealers | 29 | 31 | 29 | 18 | 21 | 9 | 7 | 16 | 14 | 7 |
| Volume | 49,992 | 26,405 | 7,956 | 12,253 | 1,637 | 629 | 1,614 | 4,243 | 2,424 | 1,717 |
| Dockside Value | $112,054 | $56,362 | $16,783 | $43,001 | $3,782 | $1,717 | $4,134 | $11,404 | $7,577 | $4,631 |
| Price per Pound | $2.24 | $2.13 | $2.11 | $3.51 | $2.31 | $2.73 | $2.56 | $2.69 | $3.13 | $2.70 |

## Appendix D.

**Table D.1. Number of Dealers Purchasing Blue Crab Landings in Louisiana, by License Type: 2000-2009**

**Table D.2. Cumulative Volume of Blue Crab Purchases in Louisiana, by License Types: 2000-2009**

**Table D.3. Cumulative Dockside Value of Blue Crab Purchases in Louisiana, by License Type: 2000 - 2009**

**Table D.1. Number of Dealers Purchasing Blue Crab Landings in Louisiana, by License Type: 2000-2009**

| License Type | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Resident Wholesale/Retail Dealer -- Business | 265 | 252 | 266 | 288 | 300 | 254 | 232 | 233 | 230 | 223 |
| Resident Wholesale/Retail Dealer -- Vehicle | 34 | 29 | 33 | 37 | 44 | 30 | 35 | 39 | 37 | 49 |
| Resident Fresh Products Dealer License | 63 | 36 | 56 | 65 | 64 | 55 | 101 | 64 | 68 | 69 |

**Table D.2. Cumulative Volume of Blue Crab Purchases in Louisiana, by License Types: 2000-2009**

| License Type | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Resident Wholesale/Retail Dealer -- Business | 48,459,668 | 37,527,389 | 46,177,953 | 44,831,841 | 41,313,312 | 34,986,997 | 47,394,957 | 40,734,014 | 40,544,723 | 47,704,471 |
| Resident Wholesale/Retail Dealer -- Vehicle | 1,880,990 | 3,276,433 | 2,735,346 | 2,127,419 | 2,061,188 | 1,581,614 | 3,285,347 | 2,251,383 | 2,336,099 | 3,781,160 |
| Resident Fresh Products Dealer | 211,363 | 92,165 | 201,392 | 156,616 | 174,528 | 181,388 | 526,344 | 221,126 | 404,769 | 349,552 |

**Table D.3. Cumulative Dockside Value of Blue Crab Purchases in Louisiana, by License Type: 2000 - 2009**

| License Type | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Resident Wholesale/Retail Dealer -- Business | $31,567,789 | $28,304,776 | $27,761,193 | $30,486,959 | $27,141,218 | $25,160,653 | $27,995,847 | $31,153,634 | $30,692,615 | $32,991,337 |
| Resident Wholesale/Retail Dealer -- Vehicle | $1,280,520 | $2,517,540 | $1,693,225 | $1,611,798 | $1,623,710 | $1,310,569 | $2,332,247 | $2,069,606 | $2,043,515 | $2,765,588 |
| Resident Fresh Products Dealer | $178,386 | $139,561 | $165,793 | $173,567 | $306,186 | $163,099 | $427,788 | $206,192 | $192,331 | $349,895 |

## Appendix E.

**Table E.1. Volume and Dockside Value of Crabs Purchased by Commercial Seafood Dealers in Southwest Louisiana: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Volume | 24,330,802 | 20,414,924 | 21,398,106 | 20,336,268 | 16,916,262 | 17,346,626 | 23,121,621 | 18,343,581 | 17,188,927 | 20,442,453 |
| Dockside Value | $15,583,805 | $15,041,592 | $12,454,034 | $13,290,071 | $11,139,791 | $11,682,337 | $13,454,383 | $13,935,983 | $13,174,133 | $14,616,450 |

**Table E.2 .Number of Dealers Reporting Crab Purchases in Southwest Louisiana, by License Type : 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wholesale/Retail Dealer -- Business | 114 | 103 | 104 | 112 | 117 | 106 | 106 | 97 | 94 | 94 |
| Wholesale/Retail Dealer -- Vehicle | 10 | 9 | 8 | 11 | 8 | 3 | 4 | 3 | 2 | 6 |
| Fresh Products Dealer | 42 | 22 | 30 | 43 | 39 | 34 | 71 | 42 | 38 | 66 |

**Table E.3 Volume of Crab Purchases in Southwest Louisiana, by License Type: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wholesale/Retail Dealer -- Business | 23,270,852 | 18,806,977 | 19,899,529 | 19,248,614 | 16,285,603 | 17,030,368 | 22,820,621 | 18,138,676 | 17,036,856 | 20,064,399 |
| Wholesale/Retail Dealer -- Vehicle | 946,531 | 1,533,174 | 1,355,172 | 959,267 | 514,750 | 222,975 | 57,189 | 12,560 | 1,707 | 58,681 |
| Fresh Products Dealer | 113,119 | 73,717 | 141,514 | 128,387 | 115,909 | 93,283 | 243,591 | 192,345 | 150,364 | 319,373 |

**Table E.4. Dockside Value of Crab Purchases in Southwest Louisiana, by License Type: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wholesale/Retail Dealer -- Business | $14,914,333 | $13,903,417 | $11,587,113 | $12,495,473 | $10,560,306 | $11,420,504 | $13,114,973 | $13,754,146 | $13,017,244 | $14,255,779 |
| Wholesale/Retail Dealer -- Vehicle | $564,859 | $1,067,934 | $762,270 | $676,750 | $333,290 | $179,074 | $97,964 | $9,032 | $1,537 | $39,362 |
| Fresh Products Dealer | $104,462 | $67,487 | $103,982 | $117,848 | $246,195 | $82,759 | $241,290 | $172,805 | $155,352 | $321,309 |

**Table E.5. Average Price per Pound for Crabs in Southwest Louisiana, by License Type: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wholesale/Retail Dealer -- Business | $0.64 | $0.74 | $0.58 | $0.65 | $0.65 | $0.67 | $0.57 | $0.76 | $0.76 | $0.71 |
| Wholesale/Retail -- Vehicle | $0.60 | $0.70 | $0.56 | $0.71 | $0.65 | $0.80 | $1.71 | $0.72 | $0.90 | $0.67 |
| Fresh Products | $0.92 | $0.92 | $0.73 | $0.92 | $2.12 | $0.89 | $0.99 | $0.90 | $1.03 | $1.01 |

**Table E.6. Average Volume and Dockside Value of Crab Purchases per Active Resident Business Dealer in Southwest Louisiana: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Avg Volume Per Dealer | 204,130 | 182,592 | 191,342 | 171,863 | 139,193 | 160,664 | 215,289 | 186,997 | 181,243 | 213,451 |
| Avg Dockside Value Per Dealer | $130,827 | $134,985 | $111,415 | $111,567 | $90,259 | $107,741 | $123,726 | $141,795 | $138,481 | $151,657 |

**Table E.7. Average Volume and Dockside Value of Crab Purchases per Active Resident Vehicle Dealer in Southwest Louisiana: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Avg Volume Per Dealer | 94,653 | 170,353 | 169,397 | 87,206 | 64,344 | 74,325 | 14,297 | 4,187 | 854 | 9,780 |
| Avg Value Per Dealer | $56,486 | $118,659 | $95,284 | $61,523 | $41,661 | $59,691 | $24,491 | $3,011 | $769 | $6,560 |

**Table E.8. Average Volume and Dockside Value of Crab Purchases per Active Resident Fresh Products Dealer in Southwest Louisiana: 2000 – 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Avg Volume Per Dealer | 2,693 | 3,351 | 4,717 | 2,986 | 2,972 | 2,744 | 3,431 | 4,580 | 3,957 | 4,839 |
| Avg Value Per Dealer | $2,487 | $3,068 | $3,466 | $2,741 | $6,313 | $2,434 | $3,398 | $4,114 | $4,088 | $4,868 |

## Appendix F

**Table F.1. Volume and Dockside Value of Crabs Purchased by Commercial Seafood Dealers in Southeast Louisiana: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Purchases (pounds) | 26,878,068 | 21,310,849 | 28,593,899 | 27,638,856 | 27,402,878 | 20,682,817 | 29,732,693 | 26,374,549 | 26,978,635 | 31,936,317 |
| Total purchases ($) | $18,254,492 | $16,905,916 | $18,079,566 | $20,230,990 | $18,724,423 | $15,841,728 | $18,495,972 | $20,876,433 | $21,009,939 | $22,029,586 |

**Table F.2. Number of Dealers Reporting Crab Purchases in Southeast Louisiana, by License Type : 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wholesale/Retail Dealer -- Business | 147 | 148 | 162 | 174 | 182 | 147 | 125 | 134 | 132 | 128 |
| Wholesale/Retail Dealer -- Vehicle | 26 | 21 | 25 | 27 | 36 | 27 | 31 | 36 | 35 | 42 |
| Fresh Products Dealer | 21 | 13 | 25 | 19 | 24 | 20 | 26 | 19 | 24 | 20 |

**Table F.3. Volume of Crab Purchases in Southeast Louisiana, by License Type: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wholesale/Retail Dealer -- Business | 25,147,022 | 18,708,989 | 26,248,050 | 25,543,933 | 24,980,139 | 17,911,470 | 24,557,043 | 22,583,081 | 23,506,281 | 27,625,553 |
| Wholesale/Retail Dealer -- Vehicle | 953,813 | 1,742,514 | 1,375,191 | 1,165,615 | 1,539,114 | 1,353,274 | 3,228,215 | 2,239,401 | 2,334,709 | 3,720,296 |
| Fresh Products Dealer | 91,670 | 16,030 | 55,324 | 21,263 | 51,231 | 83,856 | 280,092 | 26,889 | 32,419 | 28,326 |

**Table F.4 Dockside Value of Crab Purchases in Southeast Louisiana, by License Type: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wholesale/Retail Dealer -- Business | $16,747,864 | $14,446,007 | $16,173,712 | $17,959,799 | $16,481,468 | $13,662,039 | $14,849,695 | $17,372,843 | $17,669,301 | $18,727,484 |
| Wholesale/Retail Dealer -- Vehicle | $767,419 | $1,449,319 | $927,078 | $951,156 | $1,281,804 | $1,124,945 | $2,234,568 | $2,063,489 | $2,043,562 | $2,722,590 |
| Fresh Products Dealer | $70,791 | $70,153 | $62,196 | $46,927 | $45,699 | $76,542 | $183,643 | $31,411 | $35,385 | $26,358 |

**Table F.5. Average Price per Pound for Crabs in Southeast Louisiana, by License Type: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Wholesale/Retail Dealer -- Business | $0.67 | $0.77 | $0.62 | $0.70 | $0.66 | $0.76 | $0.60 | $0.77 | $0.75 | $0.68 |
| Wholesale/Retail Dealer -- Vehicle | $0.80 | $0.83 | $0.67 | $0.82 | $0.83 | $0.83 | $0.69 | $0.92 | $0.88 | $0.73 |
| Fresh Products Dealer | $0.77 | $4.38 | $1.12 | $2.21 | $0.89 | $0.91 | $0.66 | $1.17 | $1.09 | $0.93 |

**Table F.6. Average Volume and Dockside Value of Crab Purchases per Active Resident Business Dealer in Southeast Louisiana: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Avg Volume Per Dealer | 171,068 | 126,412 | 162,025 | 146,804 | 137,254 | 121,847 | 196,456 | 168,530 | 178,078 | 215,825 |
| Avg Value Per Dealer | $113,931 | $97,608 | $99,838 | $103,217 | $90,558 | $92,939 | $118,798 | $129,648 | $133,858 | $146,308 |

**Table F.7 Average Volume and Dockside Value of Crab Purchases per Active Resident Vehicles Dealer in Southeast Louisiana: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Avg Volume Per Dealer | 36,685 | 82,977 | 55,008 | 43,171 | 42,753 | 50,121 | 104,136 | 62,206 | 66,706 | 88,578 |
| Avg Value Per Dealer | $29,516 | $69,015 | $37,083 | $35,228 | $35,606 | $41,665 | $72,083 | $57,319 | $58,387 | $64,824 |

**Table F.8 Average Volume and Dockside Value of Crab Purchases per Active Resident Fresh Products Dealer in Southeast Louisiana: 2000 - 2009**

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| Avg Volume Per Dealer | 4,365 | 1,233 | 2,213 | 1,119 | 2,135 | 4,193 | 10,773 | 1,415 | 1,351 | 1,416 |
| Avg Value Per Dealer | $3,371 | $5,396 | $2,488 | $2,470 | $1,904 | $3,827 | $7,063 | $1,653 | $1,474 | $1,318 |