# The Louisiana Department of Wildlife and Fisheries Survey of Louisiana Recreational Boaters 

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The Louisiana Department of Wildlife and Fisheries Survey of Louisiana Recreational Boaters

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## Section 1. Louisiana Registered Recreational Boats

## Introduction

In the fall of 2009, the Louisiana Department of Wildlife and Fisheries conducted a survey of registered recreational motorboat owners to learn more about the individuals who own and operate recreational boats in Louisiana, the size, nature, and value of their vessels, and their views on a variety of issues related to boating, public waterways, and boating safety. The questionnaire also contained a selection of questions related to boaters' adoption and use of personal flotation devices (PFD) and their perceptions of a variety of regulatory issues.

This report presents the results of that survey. Section 1 consists of an introduction and a summary of existing records related to recreational boat registration in Louisiana and the US. Section 2 contains a narrative of the survey development and implementation, a description of the questionnaire, and a presentation of the survey's findings pertaining to the respondents' vessels' characteristics and their recreational boating use. Section 3 presents the results of the survey's questions that pertained to boating safety issues (particularly PFD use) and the respondents' views and perceptions of boating regulatory and enforcement topics.

## Recreational Boat Registration Statistics

In 2008, the LDWF Licensing Section records contained 316,593 active motorboat registrations, one for every 5.95 households. Registrations (which are active or valid for threeyear increments) were held by residents of every parish with a minimum of 249 in St. Helena Parish to a maximum of 19,258 in Jefferson Parish. The United States Coast Guard also registers boats in Louisiana, primarily vessels used in marine or saltwater environments.

Louisiana is home to 1.44 percent of the total U.S. populations but contains 2.49 percent of U.S. active boat registrations (Table 1.1). Though only twenty-fifth among all states in terms
of resident population, Louisiana ranks fifteenth among all states for the number of boat registrations. The state ranks tenth among all states in terms of per capita boat registrations as measured by active motorboat registrations per one hundred state residents.

Table 1.1. Population and Number of Registered Boats by State, District of Columbia, and Puerto Rico, 2008

| State | Population | Registered <br> Boats | State, District, or <br> Commonwealth | Population | Registered <br> Boats |
| :--- | ---: | ---: | :--- | ---: | ---: |
| Alabama | $4,677,464$ | 272,558 | Nebraska | $1,781,949$ | 83,280 |
| Alaska | 688,125 | 47,534 | Nevada | $2,615,772$ | 57,519 |
| Arizona | $6,499,377$ | 140,291 | New Hampshire | $1,321,872$ | 96,205 |
| Arkansas | $2,867,764$ | 199,104 | New Jersey | $8,663,398$ | 185,359 |
| California | $36,580,371$ | 858,853 | New Mexico | $1,986,763$ | 33,304 |
| Colorado | $4,935,213$ | 95,330 | New York | $19,467,789$ | 485,541 |
| Connecticut | $3,502,932$ | 110,650 | North Carolina | $9,247,134$ | 371,879 |
| Delaware | 876,211 | 56,669 | North Dakota | 641,421 | 46,067 |
| Florida | $18,423,878$ | 974,553 | Ohio | $11,528,072$ | 416,586 |
| Georgia | $9,697,838$ | 350,479 | Oklahoma | $3,644,025$ | 196,052 |
| Hawaii | $1,287,481$ | 15,404 | Oregon | $3,782,991$ | 180,063 |
| Idaho | $1,527,506$ | 89,026 | Pennsylvania | $12,566,368$ | 338,316 |
| Illinois | $12,842,954$ | 378,208 | Rhode Island | $1,053,502$ | 42,524 |
| Indiana | $6,388,309$ | 271,532 | South Carolina | $4,503,280$ | 436,844 |
| Iowa | $2,993,987$ | 231,333 | South Dakota | 804,532 | 56,604 |
| Kansas | $2,797,375$ | 91,067 | Tennessee | $6,240,456$ | 271,475 |
| Kentucky | $4,287,931$ | 173,981 | Texas | $24,304,290$ | 597,428 |
| Louisiana | $4,451,513$ | 316,593 | Utah | $2,727,343$ | 73,009 |
| Maine | $1,319,691$ | 109,657 | Vermont | 621,049 | 30,429 |
| Maryland | $5,658,655$ | 199,087 | Virginia | $7,795,424$ | 249,312 |
| Massachusetts | $6,543,595$ | 145,113 | Washington | $6,566,073$ | 264,393 |
| Michigan | $10,002,486$ | 816,752 | West Virginia | $1,814,873$ | 49,930 |
| Minnesota | $5,230,567$ | 867,446 | Wisconsin | $5,627,610$ | 634,546 |
| Mississippi | $2,940,212$ | 191,312 | Wyoming | 532,981 | 27,243 |
| Missouri | $5,956,335$ | 322,253 | District of Columbia | 590,074 | 2,922 |
| Montana | 968,035 | 84,988 | Puerto Rico | $3,954,553$ | 59,580 |
|  |  |  |  |  |  |

Figure 1.1 presents the percentage of Louisiana motorboats registered by length. The plurality of boats registered in 2008 ( $57.3 \%$ ) were between sixteen and twenty-six feet long. Approximately forty-eight percent (40.9\%) were less than sixteen feet long and roughly 1.8 percent were 26 feet or longer.

Figure 1.2 shows the geographic distribution of active motorboat registrations in 2008 grouped by LDWF Law Enforcement Division Regions. Region 7 in southeast Louisiana, which roughly consists of the Florida Parishes, is the place of residence for more motorboat registration holders than any other single region. Residents of coastal southeastern Regions 6 and 8 hold roughly one-quarter (24.04\%) and those in Regions 4 and 5 hold another quarter ( $24.34 \%$ ) of all active motorboat registrations in Louisiana in 2008. Residents of Regions 1, 2, and 3 in north Louisiana hold 30.21 percent of all active motorboat registrations.

Figure 1.1. Active Louisiana Recreational Motorboat Registrations by Length Categories (Excluding Personal Watercraft), 2008

26 Feet or
Longer


The distribution of boat registration holders by LDWF Law Enforcement Division regions differs significantly $\left(\chi_{(\mathrm{df}=7)}^{2}=176.64\right)$ from the distribution of the state's population residing within those regions (Figure 1.3). The percentage of boat registration holders living in coastal Region 6 is notably larger than the percentage of the state's population residing there. The percentage of boat registration holders in Region 8 is notably smaller than the percentage of the state's population who live in that area.

The number of motorboat registrations in Louisiana (Figure 1.4) in 2008 is down 4.38 percent from the number of registered motorboats in $2002(331,099)$. The decline of approximately 6,000 registered motorboats from 2005 to 2008 (coinciding with the aftermath of Hurricanes Katrina and Rita) was somewhat smaller than the decrease of 8,294 in the previous three-year period from 2002 to 2005.

Figure 1.2. Active Boat Registrations in License Year 2008

## By LDWF Enforcement Division Region



Figure 1.3. Population and Water Area


Figure 1.4. Number of Active Motorboat Registrations, Louisiana Department of Wildlife and Fisheries, 2000-2008


## Previous Publication Based on This Survey

LDWF has previously published a report based on data from this survey, Boating Safety and Waterway Enforcement: 2010 Statistical Report and Personal Flotation Device Survey. The previous report provided an analysis of the survey results based on the responses received as of January 8, 2010. It also contained more information regarding boating accidents and fatalities in Louisiana, LDWF Law Enforcement Division boating safety enforcement efforts, and the number of citations issued by LDWF enforcement agents for violations of boating safety rules, regulations, and laws.

This report constitutes a more conclusive investigation of the survey results since it incorporates all responses received through a later date. In cases of differences in descriptive statistics included in this report and those included in the previous report, the results presented in this report should be given preference.

## Section 2. Vessel Characteristics and Boating Activity

## The 2009 LDWF Boaters Survey Questionnaire

In August and September, 2009, personnel from the Louisiana Department of Wildlife and Fisheries Socioeconomic Research and Development Section and the LDWF Law Enforcement Division developed the Louisiana Department of Wildlife and Fisheries Recreational Boating Survey. The questionnaire contained six informal series of questions related to various boating-related topics. A copy of the questionnaire is available in Appendix 1.

One series of questions consisted of eight items related to the respondents' vessels, including the number of boats owned and used for recreational purposes, the length, horsepower, and steering mechanism of the most used boat, and the age and value of that boat. Another series of questions related to the use of that boat, including the number of recreational boating days and trips, the purpose of those trips, and the type of water on which those trips were taken.

A third series of questions related to personal flotation devices (PFD) or life vests. Many of these questions relate to PFD availability and use: whether respondents carry enough PFD for all passengers onboard, the frequency with which they wear PFD, and their reasons for wearing or not wearing PFD. Another series of questions on this topic sought to assess respondents' support for or opposition to current and hypothetical PFD regulations.

A fifth series of questions offered respondents the opportunity to express their views on a variety of boating resource issues, such as aquatic weed control, litter and debris removal, and boating safety efforts. A sixth series of questions were related to the respondents' personal characteristics: age, gender, and place of residence (as determined by the respondents' ZIP codes).

## Sample Selection

With the assistance of the LDWF Licensing Section and the LDWF Computer Section, a sample of 2,000 Louisiana resident recreational boat owners was randomly selected among 84,641 distinct individual boat owners that registered motorboats (excluding personal watercraft) in the twelve months prior to the survey. Since many individuals in the state own more than one boat, distinct individual boat owners were sampled rather than registered boats. This assured that no boat owners would receive more than one survey

Because LDWF recreational boat registrations are valid for three years, many of the 303 thousand active recreational motorboat registrations (excluding personal watercraft) in 2009 database may have been made or renewed as much as thirty-six months before the implementation of the survey. Thus, it was decided to draw the sample from those registrations made only within the last year to reduce the instance of invalid addresses in the sample. Addresses in the boat registration records more than one year old have a higher probability of being invalid as the individuals holding those registrations may have moved since the time when they completed the registration.

To examine the sensitivity of given responses to information about boating safety, the sample was divided into two subsamples, each receiving slightly different questionnaires. Half of the sample received a questionnaire containing a brief statement about the potential of PFD to reduce drowning deaths. Half of the sample received a version of the questionnaire without that statement.

## Questionnaire Mailing and Returns

The LDWF Socioeconomic Research and Development Survey mailed 2,000 questionnaires in early October, 2009. This first mailing also included a complementary decal,
"The Louisiana Required Equipment Checklist", a product of the LDWF Law Enforcement Division, as a token of appreciation for the respondents' time and effort in completing the questionnaire. A reminder postcard was sent approximately two weeks later. A second copy of the questionnaire was sent in November, 2009.

Thirty-one individuals were removed from the sample because their addresses were no longer valid or because the intended respondent was on active military duty or was deceased. With the removal of these, the adjusted sample size was 1,969 . As of June, 2010, 1,318 questionnaires were returned, resulting in a response rate of 66.9 percent.

Survey data was entered into an ACCESS spreadsheet. This initial investigation and analysis of the results was made in EXCEL.

## Motor Boat Operators

The questionnaire contained three questions related to the survey respondents' personal characteristics. Most (96.3\%) of the registered recreational boat owners were male (Figure 2.1). The average and median age was 54 years old (Table 2.1). This is considerably higher than the U.S. Census Bureau's projected median age for all Louisiana residents (35.7 years old) and older than the typical Louisiana resident sportsperson (anybody who hunted or fished). According to the U.S. Fish and Wildlife Service's 2006 National Survey of Fishing, Hunting, and WildlifeAssociated Recreation, 48\% of the sportsmen in Louisiana were 18 to 44 years old and $66 \%$ were 18 to 54 years old.

Figure 2.1. Gender of Respondents to the 2009 LDWF Boaters Survey


Table 2.1. Age Distribution of Respondents to the 2009 LDWF Boats Survey

| Observations | Minimum | Maximum | Mean | Median | Mode | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1,311 | 20 | 90 | 54.33 | 54 | 50 | 12.43 |

Respondents' parish of residence was determined according to their home ZIP codes. Over one-quarter (27.52\%) resided in six parishes (Table 2.2): Saint Tammany and Jefferson (tie), Caddo, East Baton Rouge, Calcasieu, and Lafayette. Over half (55.65\%) lived in thirteen parishes which included, in addition to those named above, Terrebonne, Rapides, Ouachita, Lafourche, Ascension, Livingston, and St. Martin (tied).

To display geographic distribution across the state, respondent's parish of residence were grouped according to the LDWF Law Enforcement Division Regions (Figure 2.2). Region 7 in southeastern Louisiana, with one-fifth of all respondents (20.8\%), contained more respondents than any other single region. Region 4 (13.5\%) and Region 6 (12.3\%), also in south Louisiana, were the second and third largest in terms of respondents' place of residence.

Table 2.2. Most Common Parishes of Residence among Respondents to the 2009 LDWF Boaters Survey

| Parish | Percentage of All Respondents |
| :--- | :---: |
| 1. St. Tammany and Jefferson (Tie) | $6.14 \%$ |
| 2. Caddo | $5.61 \%$ |
| 3. East Baton Rouge | $4.85 \%$ |
| 4. Calcasieu | $4.78 \%$ |
| 5. Lafayette | $4.17 \%$ |
| 6. Terrebonne | $3.87 \%$ |
| 7. Rapides | $3.79 \%$ |
| 8. Ouachita | $3.64 \%$ |
| 9. Lafourche | $3.56 \%$ |
| 10. Ascension, Livingston, and St. Martin (Tie) | $3.03 \%$ |

Figure 2.2. Place of Residence among 2009 LDWF Boaters Survey Respondents, By LDWF Enforcement Division Region

| Region Number |
| :---: |
| Number of Respondents |
| Percentage of Total |

Note: Place of residence could not be established for seventeen respondents who provided no ZIP codes or invalid ZIP codes.

The distribution of survey respondents is significantly different from the distribution of the state's population (See Figure 1.3) within these regions $\left(\chi_{(d f=7)}^{2}=95.39\right)$. Relative to the state's population, a larger portion of the respondents reside in Region 6 and smaller portions in Region 8 and Region 7. The distribution of survey respondents, however, is not statistically different $\left(\chi_{(\mathrm{df}=7)}^{2}=4.00\right)$ from the distribution of active recreational boat registrations within those regions (See Figure 1.2), arguably a more relevant standard to this survey and the survey sample than the distribution of the state's population.

## Place Where Respondents Stored Their Boats

Respondents were asked to identify the parish where they usually stored the boat they used most frequently for recreational purposes. This may provide a more accurate depiction of the geographic dispersion of the state's recreational motorboats than could be derived from an examination of the LDWF active recreational motorboat registration files which identify the registrant's mailing address, not the physical location of their vessels.

One-quarter of all respondents ( $25.1 \%$ ) stored the motorboat they used most frequently in one of five parishes (Table 2.3): Jefferson, Saint Tammany, Terrebonne, Calcasieu, and Caddo. Half (50.1\%) of the respondents store their motorboat in one of twelve parishes: the five named above plus Livingston, Rapides and Lafayette (tie), East Baton Rouge and Ouachita (tie), Lafourche, and Saint Martin. By this measure, there is a great similarity in the respondents' place of residence and the parishes in which they stored their vessel. All but one of the parishes that appear in the top-ten for parishes of residence also appear in the top-ten for parishes of storage. (Ascension, tenth among parishes of residence, is eleventh on the list of parishes in which respondents stored their boats ( $2.88 \%$ of all respondents)).

Table 2.3. Most Common Parishes in Which Respondents to the 2009 LDWF Boaters Survey Stored the Boat They Used Most Frequently for Recreational Purposes

| Parish | Percentage of All Respondents |
| :--- | :---: |
| 1. Jefferson | $6.61 \%$ |
| 2. Saint Tammany | $5.61 \%$ |
| 3. Terrebonne | $4.40 \%$ |
| 4. Calcasieu | $4.32 \%$ |
| 5. Caddo | $4.17 \%$ |
| 6. Livingston | $3.87 \%$ |
| 7. Rapides and Lafayette (Tie) | $3.72 \%$ |
| 8. East Baton Rouge and Ouachita (Tie) | $3.64 \%$ |
| 9. Lafourche | $3.41 \%$ |
| 10. Saint Martin | $2.96 \%$ |

Figure 2.3 shows the parishes where respondents store their boats as grouped into LDWF
Law Enforcement Division Regions. This distribution is not statistically different from the distribution of respondents' parishes of residence $\left(\chi_{(d f=7)}^{2}=3.50\right)$ or the parishes of LDWF active boat registrations $\left(\chi_{(\mathrm{df}=7)}^{2}=6.02\right)$.

Figure 2.3. Parishes Where Respondents to the 2009 LDWF Boaters Survey Stored the Boat They Used Most Frequently, By LDWF Enforcement Division Region


A comparison of the parish in which each individual stored his or her most frequently used motorboat to the parish in which he or she lived found that four-fifths (81.59\%) of all respondents stored their boats in the same parish in which they resided. This does imply, conversely, that approximately $18 \%$ of the respondent stored their boats in some parish other than their home parish. (Appendix 3 contains a summary of boat characteristics of vessels stored in Louisiana coastal parishes.)

Box 2.1. Geographic Variations in the Percentage of Respondents' Who Store Their Boat in the Same Parish in Which They Live

This box presents differences in the percentage of respondents who store their boat in the same parish in which they live based on the respondents' parish of residence grouped according to LDWF Enforcement Division Regions. Similar boxes throughout this report will be used to examine potential geographic variations in various vessel and use characteristics.

Figure 2.4. Percentage of $\mathbf{2 0 0 9}$ LDWF Boaters Survey Respondents Who Store Their Boat in the Same Parish in Which They Live, By Residence in LDWF Enforcement Division Region


## Characteristics of Registered Motorboats

Respondents were asked to identify how many boats used for recreational purposes they owned in 2009. The average respondent owned 1.62 boats (Table 2.4). Over half (57.0\%) owned one boat, $28.5 \%$ owned two, $8.9 \%$ owned three, and $4.6 \%$ owned four or more. (A small percentage, $0.8 \%$, reported owning zero motorboats. These may be people who sold or disposed of their vessels at some point within the last 12 months.)

Respondents were asked to provide selected statistics for the motorboat they used most frequently for recreational purposes in the past twelve months. (It was felt that gathering such statistics for all of the boats they owned would have been too cumbersome for those respondents who owned more than one boat.)

The average vessel length was 17.66 feet long (Table 2.5). Approximately one-quarter (26.3 percent) of the respondents' motorboats were less than sixteen feet long, 71.4 percent were between sixteen feet and twenty-six feet long, and 2.3 percent were twenty-six feet or longer (Figure 2.5). The distribution of boat size among respondents to this survey was substantially different from the distribution of active boat registrations in 2008 of which 48.3 percent were less than sixteen feet long, 49.3 percent were between 16 feet long and 26 feet long, and 2.4 percent were more than 26 feet long. (See Figure 1.1)

The questionnaire contained two questions pertaining to the respondents' boats' propelling system: horsepower and steering mechanism. Average horsepower was 102.22 HP and median horsepower was 75 . Nearly three-quarters ( $71.8 \%$ ) were steering-wheel operated (Figure 2.6).

Table 2.4. Distribution of the Number of Motorboats Used for Recreational Purposes by Respondents to the 2009 LDWF Boaters Survey

| Observations | Minimum | Maximum | Mean | Median | Mode | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1,303 | 0 | 10 | 1.62 | 1 | 1 | 0.969 |

Figure 2.5. Length of Boat Most Frequently Used by 2009 LDWF

## Boaters Survey Respondents by Length Categories



Table 2.5. Distribution of Length and Horsepower of the Boat Most Frequently Used for Recreational Purposes by Respondents to the 2009 LDWF Boaters Survey

|  | Observations | Minimum | Maximum | Mean | Median | Mode | Standard <br> Deviation |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Length | 1,279 | $6^{\prime}$ | $70^{\prime}$ | $17.66^{\prime}$ | $17^{\prime}$ | $16^{\prime}$ | $4.06^{\prime}$ |
| Horsepower | 1,286 | 0 HP | 1,050 | 102.22 HP | 75 HP | 25 HP | 97.41 HP |

The average tenure of ownership (the number of years that a respondent owned his or her
boat) was 8.91 years (Table 2.6). The median tenure of ownership was six years. (Tenure of ownership is not identical to the age of the boat since many individuals purchase used boats.)

Table 2.6. Distribution of Tenure of Boat Ownership among Respondents to the 2009 LDWF Boaters Survey

|  | Observations | Minimum | Maximum | Mean | Median | Mode | Standard <br> Deviation |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Tenure of <br> Ownership (years) | 1,270 | 0 | 135 | 8.91 | 6 | 3 | 9.88 |

Figure 2.6. Motorboat Operating Mechanisms on Boats Most Frequently Used for Recreational Purposes by Respondents


The average purchase price of the respondents' most frequently used motorboats (or estimated value of the boat at acquisition for boats that were received as a gift or built by the owner) was $\$ 14,057$ (Table 2.7). The average estimated current market value of these boats, based on the respondents' estimates of the price at which the boats could be sold at the time of the survey, was $\$ 9,364$. The average current market value was significantly lower than the average purchase price $(t=6.45)$. This may reflect depreciation or the decline in the value of boats as they age.

Table 2.7. Distribution of Original Purchase Price and Current Market Value of the Boat Most Frequently Used for Recreational Purposes by Respondents to the 2009 LDWF Boaters Survey

|  | Observations | Minimum | Maximum | Mean | Median | Mode | Standard <br> Deviation |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| Original <br> Purchase Price | 1,260 | 0 | $\$ 450,000$ | $\$ 14,057$ | $\$ 9,000$ | $\$ 12,000$ | 21,395 |
| Current <br> Market Value | 1,251 | 0 | $\$ 200,000$ | $\$ 9,364$ | $\$ 5,000$ | $\$ 3,000$ | 14,375 |

## Box 2.2. Geographic Variations in Boat Length and Horsepower Based on Respondents' Place of Residence

This box presents differences in the boat length and horsepower based on the respondents' parish of residence grouped according to LDWF Enforcement Division Regions. Average boat length and horsepower are highest in southeastern Regions 7 and 8 and lowest in Region 2 and Region 3 in the central and northeastern portion.

Figure 2.7. Length of Boats Owned by 2009 LDWF Boaters Survey Respondents, By Residence in LDWF Enforcement Division Region


Figure 2.8. Horsepower of Boats Owned by 2009 LDWF Boaters Survey Respondents, By Residence in LDWF Enforcement Division Region


Box 2.3. Geographic Variations in the Steering Mechanisms Based on Respondents' Place of Residence

This box presents differences in the percentage of steering mechanisms on respondents' most frequently used boat based on the LDWF Enforcement Division Region in which the respondents reside. Steering wheel operated vessels are relatively more common in the coastal regions (Region 4 through 8) than in the non-coastal regions (Region $1-3$ ). Conversely, stickoperated and tiller-operated vessels were relatively more common in the non-coastal regions than the coastal regions.

Figure 2.9. Steering Mechanisms of Boats Owned by LDWF Boaters Survey Respondents, By Residence in LDWF

Enforcement Division Region


## Box 2.4. Geographic Variations in Tenure of Ownership Based on Respondents' Place of Residence

This box presents differences in the tenure of ownership (the length of time that respondents have owned the boats) of the boats they use most frequently by respondents' parish of residence grouped according to LDWF Enforcement Division Regions. The lowest average tenure of ownership is observed among respondents residing in Region 7 in southeast Louisiana. The highest average tenure of ownership is seen among those living in Region 2 in northeastern Louisiana and Region 3 in central Louisiana.

Figure 2.10. Years of Boat Ownership by 2009 LDWF Boaters Survey Respondents, By Residence in LDWF Enforcement Division Region


Most vessel characteristics (horsepower, steering-mechanism, current market value, and original purchase price) varied substantially among vessels of different length (as determined by the respondents' boat length categories). The average horsepower for respondents' vessels was 35.97 HP in the less than sixteen feet category, 119.41 HP in the sixteen to twenty-six feet category, and 404.97 HP in the 26 feet and longer category (Table 2.8). The average current market value was $\$ 6,019$ in the less than sixteen feet category, $\$ 10,333$ in the sixteen to twenty-
six feet category, and $\$ 57,931 \mathrm{HP}$ in the 26 feet and longer category. The average original purchase price (or estimated value at acquisition) rose from $\$ 3,900$ for boat under 16 feet long to $\$ 15,608$ for boats sixteen to twenty-six feet long to $\$ 85,034$ for boats twenty-six feet or longer.

Further, among boats in the less than sixteen feet category, $42.69 \%$ were stick-operated and $27.76 \%$ were steering wheel-operated (Figure 2.11 ). The majority of boats in the sixteen to twenty-six feet category ( $87.46 \%$ ) and the 26 feet and longer category ( $96.55 \%$ ) were steering wheel-operated.

Table 2.8. Distribution of Horsepower, Current Market Value, and Original Purchase Price of the Boat Most Frequently Used for Recreational Purposes by Respondents to the 2009 LDWF Boaters Survey, By Boat Length Category

| Length <br> Category | Characteristic | Observations | Average | Median | Standard <br> Deviation |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Horsepower | 326 | 35.97 | 25 | 70.68 |
|  | Market Value | 316 | \$6,019 | \$2,000 | 56,440 |
|  | Purchase Price | 313 | \$3,900 | \$2,100 | 6,617 |
|  | Horsepower | 900 | 119.41 | 115 | 75.51 |
|  | Market Value | 876 | \$10,333 | \$8,000 | 9,485 |
|  | Purchase Price | 888 | \$15,608 | \$13,000 | 12,408 |
|  | Horsepower | 29 | 404.97 | 300 | 272.91 |
|  | Market Value | 29 | \$57,931 | \$40,000 | 54,428 |
|  | Purchase Price | 29 | \$85,034 | \$60,000 | 92,914 |

Figure 2.11. Steering Mechanisms of Boats Owned by LDWF Boaters Survey Respondents, By Boat Length Category


## Box 2.5. Geographic Variations in Boats’ Purchase Price Based on Respondents’ Place of Residence

The average and median purchase price of the boats most frequently used by respondents residing in LDWF Enforcement Division Region may be seen below. The average and median purchases prices are highest in the southeastern portion of Louisiana (Regions $6-8$ ) and lowest in central and northeastern Louisiana (Region 2 and Region 3). (Note: It has not been determined how regional variations in the boat characteristics examined in this report, such as boat size, horsepower, and tenure of ownership affect regional differences in purchase price.)

Figure 2.12. Estimated Purchase Price of Boats Owned by 2009 LDWF Boaters Survey Respondents, By Residence in LDWF Enforcement Division Region


## Box 2.6. Geographic Variations in Boats’ Estimated Current Market Value Based on Respondents' Place of Residence

Similar to patterns observed in the reported purchase prices of vessels owned by respondents residing in different LDWF Enforcement Division Regions, the highest average and median estimated current market value for respondents' most frequently used boats are seen in southeastern Louisiana (Region 7 and Region 8). The lowest average and median current market value are seen in Region 2 and Region 3. (Note: It has not been determined how regional variations in the boat characteristics examined in this report, such as boat size, horsepower, and tenure of ownership affect regional differences in estimated current market value.)

Figure 2.13. Estimated Current Market Value of Boats Owned by 2009 LDWF Boaters Survey Respondents, By Residence in LDWF Enforcement Division Region


## Recreational Motorboat Use

Recreational motorboat use was examined in a series of questions which asked respondents to provide details regarding their activities with the motorboat most frequently used for recreational purposes in the twelve months prior to the survey. Respondents took the motorboat they most frequently used for an average of 20.08 trips (median $=10$ ) over an average of 23.90 days (median $=12$ ) (Table 2.9). On a typical trip, the average number of people onboard (Table 2.10) was 2.62 people (median $=2$ ). (This estimate of the average number of people onboard a vessel during a typical recreational boating trip is slightly lower than the United States Coast Guard's estimate of 2.9 people per vessel.)

It appears that relatively few of these trips included a youth aged 16 and under. Half (50.4\%) of the respondents claim "never" or "rarely" to take a youth on a recreational boating trip (Figure 2.14). Only 5.8 percent always and 16.8 percent frequently take youths on a recreational boating trip. The age distribution of the respondents offers one possible explanation of this pattern. The average and median age of the respondents was 54 , implying that half of the survey respondents may have reached a portion of their life cycles when they no longer have youths of age 16 and under residing in their households.

Table 2.9. Distribution of the Number of Trips and Recreational Boating Days Taken in the Twelve Months Prior to the Survey by Respondents to the 2009 LDWF Boaters Survey

|  | Observations | Minimum | Maximum | Mean | Median | Mode | Standard <br> Deviation |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Number of <br> Trips | 1,306 | 0 | 300 | 20.08 | 10 | 0 | 33.55 |
| Number of <br> Days | 1,301 | 0 | 365 | 23.90 | 12 | 0 | 38.46 |

Table 2.10. Distribution of the Number of People Onboard a Typical Recreational Boating Trip Taken by Respondents to the $\mathbf{2 0 0 9}$ LDWF Boaters Survey in the Twelve Months Prior to the Survey

| Observations | Minimum | Maximum | Mean | Median | Mode | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1,304 | 0 | 20 | 2.62 | 2 | 2 | 1.501 |

Figure 2.14. How Often Respondents to the 2009 LDWF Boaters Survey Take Youths (16 and Under) on Recreational Boat Trips


## Box 2.7. Geographic Variations in Trips and Days Based on Respondents' Place of

 ResidenceThis box presents differences in the number of boating trips and boating days taken by respondents in each LDWF Enforcement Division Region on the boat the respondents used most frequently. Region 7 in southeast Louisiana had the lowest average numbers of trips and days. Region 6 had the highest average number of trips and days.

Figure 2.15. Number of Boating Trips Taken by 2009 LDWF Boaters Survey Respondents, By Residence in LDWF Enforcement Division Region


Figure 2.16. Number of Boating Days Taken by 2009 LDWF Boaters Survey Respondents, By Residence in LDWF Enforcement Division Region


## Box 2.8. Geographic Variations in Number of People On Board Based on Respondents' Place of Residence

The average number of people onboard a typical trip on the boats respondents used most frequently showed little variation among respondents residing in different LDWF Enforcement Regions. The median number of people onboard a typical trip is identical (two people) in every region.

Figure 2.17. Number of People Onboard a Typical Trip Taken by 2009 LDWF Boaters Survey Respondents, By LDWF Enforcement Division Region


Box 2.9. Geographic Variations in Frequency of Trips with Youths Based on Respondents' Place of Residence

This box presents differences in the frequency with which respondents in each LDWF Enforcement Division Region took youths (sixteen and under) on boating trips on the boat they used most frequently. The percentage who "always" or "frequently" took youths on boating trips ranged from $16.5 \%$ (Region 3) to $26.1 \%$ (Region 7). The percentage who "rarely" or "never" took youths on boating trips ranged from 43.9\% (Region 5) to 57.9\% (Region 3).

Figure 2.18. How Often LDWF Boaters Survey Respondents Take Youths (16 and Under) on Recreational Boating Trips, By LDWF Enforcement Division Region


| $\square$ Never | $\Delta$ Rarely | $\square$ Sometimes | 目 Frequently $\quad \square$ Always |
| :--- | :--- | :--- | :--- | :--- |

## Boat Use by Water Type

As a coastal state, Louisiana's recreational boaters have opportunities to use their boats in a variety of different water types and locations, including freshwater or inland waters; saltwater, marsh, or brackish water; offshore waters; or private ponds (Figure 2.19). (Since a boat can be used on more than one water body during the course of the year, the water type categories were not mutually exclusive.) More respondents used their boats in inland waters and freshwater (73.77\%) during the twelve months prior to the survey than any other water type. About twofifths (42.07\%) used their boats in saltwater, marsh, or brackish waters. Less than ten percent of all respondents used their boats in ponds or other private waters ( 7.67 percent) or offshore or Gulf (7.29\%).

Figure 2.19. Categories of Water Types or Locations on Which Respondents to the 2009 LDWF Boaters Survey Took the Boat They Used Most Frequently in the Twelve Months Prior to the Survey


Among those respondents who took at least one freshwater trip in the 12 months prior to the survey, the average respondent took $80.8 \%$ of all of his or her trips on freshwater (Table 2.11). Nearly two-thirds ( $63.3 \%$ ) of those who took at least one freshwater trip in their most frequently-used boat used their boat exclusively on freshwater, that is, they took the boat out on freshwater one-hundred percent of the time. Similar details are presented in Table 2.11 for those who took trips on saltwater, private ponds, and offshore and in the Gulf.

Table 2.11. Categories of Water Types on Which Respondents to the 2009 LDWF Boaters Survey Took the Boat They Used Frequently in the Twelve Months Prior to the Survey


The number of trips respondents took (in the boat they used most frequently) in each water type category can be estimated by multiplying the total number of boating trips each respondent took (in the boat they used most frequently) times the percentage of all trips taken on a particular water type (Table 2.12). The average number of boating trips per respondent (in the boat they used most frequently) was highest for freshwater or inland waters (12.14 trips) and lowest for ponds or private waters ( 0.838 trips) and Gulf waters or offshore waters ( 0.473 ).

The variable "average number of boating trips in the boat used most frequently" should be interpreted with some care. It does not represent the average number of all trips an individual took on a particular water type, only those taken in a particular vessel. (An individual may have taken additional trips in another boat.) Further, since the average is notably greater than the median in the inland waters or freshwater category and the saltwater, marsh, or brackish category, the average may be somewhat misleading as a "measure of central tendency" in representing the number of trips a typical Louisiana boat owner took using the boat he or she uses most frequently.

Table 2.12. Distribution of Trips Taken by Respondents to the 2009 LDWF Boaters Survey in the Boat Used Most Frequently, By Water Type Category

| Water Type | Observations | Average | Median | Mode | Standard <br> Deviation |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Ponds or Other Private <br> Water | 1,298 | 0.838 | 0 | 0 | 5.49 |
| Inland Waters or <br> Freshwater | 1,296 | 12.14 | 3.66 | 0 | 27.28 |
| Saltwater, Marsh, and <br> Brackish Waters | 1,297 | 6.77 | 0 | 0 | 20.62 |
| Offshore or Gulf | 1,298 | 0.473 | 0 | 0 | 3.04 |

Box 2.10. Geographic Variations in Boating Trips Taken in the Boat Used Most Frequently By Water Type Category and Respondents’ Place of Residence

Table 2.13 shows the average and median number of trips taken (using the boat used most frequently) on each water type by respondents residing in each LDWF Enforcement Region. Figure 2.20 shows the percentage of all respondents residing in each region who reported taking at least one boating trip (in the boat used most frequently) on each water type category. (Categories of water types are not mutually exclusive since one boat may be used on more than one water type.)

Utilization of freshwater was highest in inland Regions $1-3$ where the percentage of respondents who used their boats on freshwater and the average number of freshwater trips were higher than those for the statewide statistics. (See Table 2.9 and Table 2.11.)

Utilization of saltwater, brackish water, and marsh was highest along the coast in Regions 4-8. In Region 6, the average number of saltwater trips (13.04) was higher than the average number of freshwater trips (9.39) though the saltwater use rate (68.2\%) was slightly lower than the freshwater use rate ( $70.7 \%$ ). In Region 8, the saltwater use rate was higher than the freshwater use rate and the average number of saltwater trips was higher than the average number of freshwater trips.

Table 2.13. Distribution of Trips Taken by Respondents to the 2009 LDWF Boaters Survey in the Boat Used Most Frequently, By Water Type Category and Residence in LDWF Enforcement Regions

| Water Type |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ponds or Other Private Water | Obs. | 151 | 120 | 136 | 173 | 151 | 157 | 267 | 137 |
|  | Avg. | 1.08 | 1.23 | 1.22 | 0.22 | 1.15 | 1.58 | 0.23 | 0.69 |
|  | Med. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Inland Waters or Freshwater | Obs. | 150 | 120 | 136 | 173 | 151 | 157 | 266 | 131 |
|  | Avg. | 14.78 | 21.66 | 20.61 | 13.68 | 9.53 | 9.39 | 8.25 | 4.42 |
|  | Med. | 6 | 9.3 | 8 | 4 | 2.4 | 3 | 2 | 0 |
| Saltwater, Marsh, and Brackish Waters | Obs. | 151 | 120 | 136 | 173 | 151 | 157 | 267 | 131 |
|  | Avg. | 0.39 | 0.36 | 0.54 | 8.82 | 9.34 | 13.04 | 7.16 | 12.95 |
|  | Med. | 0 | 0 | 0 | 0 | 0 | 4.5 | 1.8 | 8 |
| Offshore or Gulf | Obs. | 151 | 120 | 136 | 173 | 151 | 157 | 267 | 131 |
|  | Avg. | 0.10 | 0.23 | 0.001 | 0.4 | 0.31 | 1.38 | 0.49 | 0.83 |
|  | Med. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Box 2.10. Geographic Variations in Boating Trips Taken in the Boat Used Most Frequently By Water Type Category and Respondents' Place of Residence (Continued)

Figure 2.20. Percentage of Respondents Who Use Boat on Specified Categories of Water, By LDWF Enforcement Region


## Boat Use by Activity Type

Respondents were asked to identify the types of activities in which they participated while using the motorboat they used most frequently in the twelve months prior to the survey (Figure 2.21). The most commonly pursued activity was recreational fishing ( $80.8 \%$ of all respondents). Approximately one-sixth (15.9\%) used their motorboats while hunting or participating in water skiing and other water sports (16.4\%). Approximately one-quarter (24.3\%) used their motorboats for some sort of recreational boating activity other than water sports.

Figure 2.21. Activities Respondents to the 2009 LDWF Boaters Survey Participated in the Twelve Months Prior to the Survey in the Boat They Used Most Frequently


Specific activities identified by respondents checking the "other" category are presented in Box 2.11. These activities are reported exactly as the respondents who marked the "other" alternative wrote them. The repetition of an activity description, such as, "swimming", means more than one person specified that activity in response to the "other" category. In some instances, the activities reported as "other activities" by the respondents may be similar to or identical to activities in the pre-existing categories included on the questionnaire.

Box 2.11. Activities Specified as "Other" Activities In Which 2009 LDWF Boaters Survey Respondents Participated in the Boat They Used Most Frequently

- Frogging
- Trapping
- Recreational crabbing
- Recreational crabbing
- Only for bream and catfish
- Tournament fishing
- Bass fishing
- Bass fishing
- Fishing
- Fishing
- Set trot lines
- Swimming
- Swimming
- Diving
- Cutting bushes
- Working on camp
- Work on piers
- Used boat to pack gear, ankle deep
- Camp on state land
- Back and forth to camp
- Riding and site seeing
- Going to camp
- Going to camp
- To and from camp
- To get to my camp
- Use to go to camp


## Box 2.11. Activities Specified as "Other" Activities In Which 2009 LDWF Boaters Survey Respondents Participated in the Boat They Used Most Frequently (Continued)

- Going to and from camp
- Camp
- Going to camp
- Going to camp
- Scouting
- Just went boat riding
- Just riding
- Boat riding
- Sailing
- Sightseeing
- Sightseeing
- Exploring
- Traveling to friends' home
- Just ran it to see how it runs
- Try new boat but burned water pump which cost about $\$ 300$ because grass has filled up old river

Table 2.14 presents a detailed examination of the percentage of all survey respondents who used their motorboats to participate in various activities. It also shows the average and median percentage of the trip related to that activity among those respondents who indiciated that they used that boat to participate in that activity category. For example, $81.0 \%$ of all respondents took at least one recreational fishing trip on the boat they used most frequently in the twleve months prior to the survey. Among those who used their boats at least once to go fishing in the previous twelve months, the average used his or her boat for fishing on $81.0 \%$ of all his or her boating trips. More than half of these (53.0\%) used the boat exclusively for recreational fishing trips, that is, he or she went recreational fishing on all (100\%) of the boating trips taken in the previous twelve months. Similar details are presented in Table 2.14 for hunting, commercial fishing, recreational boating, skiing and other water sports, and other activities.

Table 2.14. Activities Respondents to the 2009 LDWF Boaters Survey Participated in the Twelve Months Prior to the Survey in the Boat They Used Most Frequently

|  | Percentage of Respondents Who Used Boat for Rec. Fishing | Among Those Who Used Boat for Recreational Fishing |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Average Percentage of Boat Trips for Rec. Fishing | Median Percentage of Boat Trips for Rec. Fishing | Percentage Who Spent $100 \%$ of Boat Trips Rec. Fishing |
|  | 81.0\% | 81.0\% | 100\% | 53.0\% |
|  | Percentage of <br> Respondents Who Used Boat for Hunting | Among Those Who Used Boat for Hunting |  |  |
|  |  | Average Percentage of Boat Trips for Hunting | Median <br> Percentage of Boat Trips for Hunting | Percentage Who Spent $100 \%$ of Boat Trips Hunting |
|  | 15.9\% | 43.4\% | 40.0\% | 7.7\% |
|  | Percentage of <br> Respondents Who <br> Used Boat for <br> Comm. Fishing | Among Those Who Used Boat for Commercial Fishing |  |  |
|  |  | Average Percentage of Boat Trips for Comm. Fishing | Median <br> Percentage of Boat Trips for Comm. Fishing | Percentage Who Spent $100 \%$ of Boat Trips Comm. Fishing |
|  | 4.5\% | 37.6\% | 25.0\% | 5.4\% |
|  | Percentage of Respondents Who Used Boat for Water Sports | Among Those Who Used Boat for Water Sports |  |  |
|  |  | Average Percentage of Boat Trips for Water Sports | Median <br> Percentage of Boat Trips for Water Sports | Percentage Who Spent $100 \%$ of Boat Trips on Water Sports |
|  | 16.4\% | 37.0\% | 20.0\% | 13.1\% |
|  | Percentage of <br> Respondents Who <br> Used Boat for Rec. <br> Boating | Among Those Who Used Boat for Recreational Boating |  |  |
|  |  | Average Percentage of Boat Trips for Rec. Boating | Median <br> Percentage of Boat <br> Trips for <br> Recreational <br> Boating | Percentage Who Spent $100 \%$ of Boat Trips on Rec. Boating |
|  | 24.3\% | 41.38\% | 20.0\% | 16.5\% |
| 淢 | Percentage of <br> Respondents Who <br> Used Boat for Other Purposes | (See Box 2.11 for more information.) |  |  |
|  | 4.00\% |  |  |  |

The number of trips respondents took (in the boat they used most frequently) in pursuit of each activity category can be estimated by multiplying the total number of boating trips each respondent took (in the boat they used most frequently) times the percentage of all such trips related to a particular activity (Table 2.15). The average number of boating trips per respondent (in the boat they used most frequently) was highest for recreational fishing (13.72 trips) and lowest for commercial fishing (1.12 trips).

The average statistics reported in Table 2.15 represent an average number of trips in the boat the respondent used most frequently. It does not represent the average number of all trips an individual took related to a specific activity, only those taken in a particular vessel. (An individual may have taken additional trips in another boat or without a boat.) Further, since the average is notably greater than the median in recreational fishing category, the average may be somewhat misleading as a "measure of central tendency" in representing the number of trips a typical boat owner took using the boat he or she used most frequently.

Table 2.15. Distribution of Trips Taken by Respondents to the 2009 LDWF Boaters Survey in the Boat Used Most Frequently, By Activity Category

| Activity Category | Observations | Average | Median | Mode | Standard <br> Deviation |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Recreational Fishing | 1,296 | 13.72 | 6 | 0 | 25.49 |
| Hunting | 1,296 | 2.37 | 0 | 0 | 12.33 |
| Commercial Fishing | 1,296 | 1.12 | 0 | 0 | 14.70 |
| Skiing or Other Water Sports | 1,295 | 1.18 | 0 | 0 | 7.05 |
| Recreational Boating | 1,295 | 1.84 | 0 | 0 | 10.29 |
| Other | 1,292 | 0.382 | 0 | 0 | 4.41 |

Box 2.12. Geographic Variations in Boating Trips Taken in the Boat Used Most Frequently By Activity Category and Respondents' Place of Residence

Table 2.16 shows the average and median number of trips taken (in the boat used most frequently) related to each activity category by respondents residing in each region. Figure 2.22 shows the percentage of all respondents residing in each region who reported taking at least one boating trip (in the boat used most frequently) related to each activity category. (Activity categories are not mutually exclusive since one boat may participate in more than one activity per trip.)

Whether measured by the average number of trips or participation rates, recreational fishing is the most common activity pursued by respondents in the boats that they use most frequently in every region.

Table 2.16. Distribution of Trips Taken by Respondents to the 2009 LDWF Boaters Survey in the Boat Used Most Frequently, By Activity Category

| Activity Category |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Recreational Fishing | Obs. | 151 | 120 | 136 | 172 | 151 | 157 | 267 | 130 |
|  | Avg. | 12.66 | 18.85 | 17.24 | 9.84 | 16.01 | 13.57 | 10.85 | 15.95 |
|  | Med. | 3 | 8 | 5.5 | 4.25 | 6 | 7.5 | 5 | 8 |
| Hunting | Obs. | 151 | 120 | 136 | 172 | 150 | 157 | 267 | 131 |
|  | Avg. | 0.65 | 0.78 | 1.39 | 5.62 | 1.98 | 3.89 | 1.41 | 1.00 |
|  | Med. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Commercial Fishing | Obs. | 151 | 120 | 136 | 171 | 151 | 157 | 266 | 131 |
|  | Avg. | 0.07 | 1.20 | 0.04 | 0.23 | 1.10 | 4.71 | 0.13 | 0.12 |
|  | Med. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Skiing or Other Water Sports | Obs. | 151 | 120 | 136 | 171 | 151 | 157 | 265 | 131 |
|  | Avg. | 1.23 | 0.52 | 1.56 | 1.04 | 1.32 | 0.97 | 1.49 | 1.02 |
|  | Med. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Recreational Boating | Obs. | 151 | 120 | 136 | 172 | 151 | 157 | 266 | 131 |
|  | Avg. | 1.59 | 1.63 | 2.37 | 1.62 | 1.07 | 2.71 | 1.98 | 1.74 |
|  | Med. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | Obs. | 149 | 119 | 135 | 172 | 150 | 157 | 267 | 131 |
|  | Avg. | 0.30 | 0.41 | 0 | 1.26 | 0.48 | 0.11 | 0.25 | 0.21 |
|  | Med. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Box 2.10. Geographic Variations in Boating Trips Taken in the Boat Used Most Frequently By Activity Category and Respondents' Place of Residence (Continued)

Figure 2.22. Percentage of Respondents Who Use Boat to Participate in Specified Activities, By Residence in LDWF Enforcement Region


## Data Limitations

As with any survey or dataset, the data collected through the LDWF Boaters Survey are limited in scope and meaning. These limitations or restrictions affect the interpretation of the results.

The sample population forms the first of these limitations. The survey sample was drawn from the active motorboat registration files maintained by the LDWF Licensing Section. The survey sample does not include individuals in Louisiana who have registered their vessels with the United States Coast Guard or those who may engage in recreational boating in Louisiana in boats registered in another state (such as Mississippi or Texas). Further, the sample frame does not include non-motorized boats, such as canoes and kayaks, as well as motorboats boats used solely on private ponds.

Second, the survey results pertain to a single vessel owned by the respondents, the boat that he or she used most frequently. Thus, survey results may not describe all of the boating activity and vessel characteristics for survey respondents who own more than one boat. (Approximately 43 percent of survey respondents owned two boats or more.)

Third, the survey results pertain only to the respondents' activity in one boat, not all the individual respondents' activities. Respondents may engage in activities (for example, fishing or hunting) in some other platform that would not be described in this survey.

Fourth, the geographical patterns described throughout this section were based on the respondents' place of residence and not the location in which they engaged in recreational boating activity. Since an individual may live in one parish and use her boat in another, one should not draw inferences about the level of activity within a specific region based solely upon the results of this survey.

## Section 3. Boating Safety and Other Topics

The observance of boating safety guidelines and regulations by recreational boaters is an issue of concern to the LDWF Law Enforcement Division, the LDWF Boating Safety Education Program, the U.S. Coast Guard, and others in the boating community. Obtaining a measure of the boating public's stated adherence to safety recommendations, regulations, and laws was one of the principal goals of the 2009 LDWF Boaters Survey. Indeed, the survey was implemented in response to a Louisiana House of Representatives Concurrent Resolution requesting a report on the adoption and use of personal flotation device (PFD) or life vests by Louisiana recreational boaters (Appendix 2).

This section begins with a brief description of current Louisiana rules, regulations, and laws related to PFD and a brief description of previous research regarding PFD use that was conducted by or on behalf of the United States Coast Guard. It then presents the results of questions on the 2009 LDWF Boaters Survey that pertained to PFD use, boating safety regulations, and other topics of concern to recreational boaters.

## Louisiana Regulations and Laws Related to Personal Flotation Device Use

By Louisiana law, recreational boaters must carry enough approved personal flotation devices (PFD) or life vests for all passengers when the vessel is underway. As of July 1, 2009, all passengers 16 years old and younger were required to wear PFD when vessels were underway. (Prior to July 1, 2009, mandatory PFD wearing was required only for passengers 12 years old and younger.) Wearing PFD by passengers 17 years old and older is recommended but is not legally mandated.

## Previous Research on Personal Flotation Device Use

The United States Coast Guard, which plays a key role in promoting and monitoring the adoption, development, and use of PFD, has published several reports of interest regarding PFDuse by recreational boaters in the United States. One study, The 2002 National Recreational Boating Survey Report by the Strategic Research Group (2003), contained the results of a survey of 25,547 boaters across the U.S. that asked respondents how many PFD they carried on their vessels and how often they wore PFD when using their boats. Another study, The 2007 National Life Jacket Wear Rate Observation Study Final Report by the JSI Research and Training Institute (2008), measured how often recreational boaters wore PFD based on the observations of trained observers who viewed and recorded actual boaters' behavior.

Selected Results from The 2002 National Recreational Boating Survey Report
In its report, The 2002 National Recreational Boating Survey Report, the Strategic Research Group reported that $95.9 \%$ of all boaters in the U.S. in 2002 claimed to carry enough PFD for all passengers, including themselves, on their vessels (Figure 3.1). In Louisiana, in 2002, $97.7 \%$ of all respondents to this 2002 survey, claimed to carry enough PFD for everybody onboard their vessels (Figure 3.2). The reported percentages who carried an adequate number of PFD on their vessels varied by boat type from a low of $79.3 \%$ among owners of inflatable rafts nationally to highs of $98.2 \%$ for owners of cabin motorboats and $98.7 \%$ for owners of open motorboats nationally.

Figure 3.1. Number of PFD Usually Carried Onboard Vessels by U.S. Boaters in 2002


Source: 2002 National Recreational Boating Survey Report, Strategic Research Group, 2003

Figure 3.2. Number of PFD Usually Carried Onboard Vessels by Louisiana Boaters in 2002


Source: 2002 National Recreational Boating Survey Report, Strategic Research Group, 2003

The 2002 National Recreational Boating Survey also asked boaters how often they wore a PFD or life jacket when operating their vessels: always, most of the time, sometimes, rarely, or never (Figure 3.3). Over one-third (34.8\%) of boat operators nationwide in 2002 claimed they "'always' wore a PFD" and $12.5 \%$ claimed they wore a PFD "most of the time" when operating their boats. The same survey found that among Louisiana respondents in 2002 (Figure 3.4), 29.5 percent claimed they "always" wore a PFD and 18.1 percent claimed to wear one "most of the time".

The report also found a correlation between many factors and the likelihood of wearing a PFD. Younger boat operators were more likely to wear PFD than older boat operators. Female boat operators were more likely to wear PFD than male boat operators. More highly educated boat operators were less likely to wear PFD than less educated boat operators. Respondents who could not swim were more likely to wear PFD than those who could swim.

Figure 3.3. How Often U.S. Boaters Reported Wearing PFD When Operating Their Boats in 2002


Figure 3.4. How Often Louisiana Boaters Reported Wearing PFD When Operating Their Boats in 2002


Source: 2002 National Recreational Boating Survey Report, Strategic Research Group, 2003

Selected Results from The National Life Jacket Wear Rate Observation Study
The National Life Jacket Wear Rate Observational Study is based on the measurements of teams of observers who monitor boaters' activities and PFD use in the field. These teams periodically observe boaters in 19 coastal states and 11 inland states and record the percentage of all the boaters that actually wear PFD onboard vessels that are underway. By their count, only $4.1 \%$ of all adults (18 and older) on powerboats (excluding personal watercraft) were wearing PFD at the time they were observed for the years 2004 to 2006. Among youths 13 to 17 years old on powerboats, $27.2 \%$ were wearing PFD. Among youths 12 years old and younger on powerboats, $83.0 \%$ were wearing PFD.

Wear-rates were higher on sailboats (23.8\% for adults; $58.1 \%$ for youth $13-17 ; 89.3 \%$ for youth 12 and younger) and paddle craft (59.1\% for adults; 68.0\% for youths $13-17 ; 93.5 \%$
for youths 12 and younger). Observed PFD use for all classes of vessels varied according to a number of factors, including boat size and type, weather, and water conditions.

## LDWF Boaters Survey Questions Pertaining to Boating Safety Topics

Existing data are somewhat limited in their capacity to measure boaters' preferences and motivations pertaining to PFD use and PFD-related regulations and policies. To obtain more current information regarding Louisiana's boaters' perspectives on boating safety issues, the 2009 LDWF Boaters Survey included seven questions related to respondents' use of PFD and their perceptions of related regulations. The first of this series of questions asked respondents how many PFD they typically carried onboard their boats (enough for all passengers, enough for some but not all passengers, or no PFD). The second question asked respondents to identify (on a five-point Likert scale) how frequently they wore PFD while underway. Two related questions asked respondents to identify the reasons why they wore or did not wear PFD. The last three PFD-related survey questions asked respondents to indicate their level of opposition to or support for real or hypothetical regulations mandating PFD use by boaters in different age categories.

In addition to the seven PFD-related questions, the questionnaire included two questions regarding the deployment of boating safety resources in Louisiana, one question regarding the disposition of tax revenues obtained from recreational boaters' fuel purchases, and questions soliciting respondents preferences for selected waterway improvement or management practices.

## Adoption and Use of Personal Flotation Devices

Nearly all respondents to the LDWF Boaters Survey (99.69\%) claimed to carry enough PFD for everybody on their vessels (Figure 3.5). This was somewhat higher than the rates reported for Louisiana and the U.S. in 2002. As shown above, The 2002 National Recreational

Figure 3.5. Number of PFD Usually Carried Onboard by Respondents to the 2009 LDWF Boaters Survey


Boating Survey Report estimated that $95.9 \%$ of recreational boaters nationwide and $97.6 \%$ of recreational boaters in Louisiana carried enough PFD for every passenger onboard in 2002. (See Figure 3.1 and Figure 3.2)

The reported compliance rate (99.69\%) by respondents to the 2009 LDWF Boaters Survey implies a reported non-compliance rate of $0.31 \%$. This is lower than the estimated observed non-compliance rate that can be calculated using LDWF Law Enforcement Division citation records. LDWF Law Enforcement Division agents issued 1,412 citations for failure to carry enough PFD for everybody onboard in calendar year 2009. During this same period, the LDWF Law Enforcement Divisions made public contacts with 256,725 individuals related to boating safety enforcement efforts. Since citations for this violation are most often issued to a boat and not to individuals, the number of vessels contacted can be calculated by dividing the number of public contacts by the estimated number of persons onboard each vessel. Using an estimated average of 2.62 persons per boat derived from this report, an estimate of the number of
boats contacted in 2009 is 97,987 . Dividing the number of citations $(1,412)$ by these estimates for the number of boats contacted generates an estimated observed non-compliance rate of $1.44 \%$. Thus, the percentage of boaters who carry enough PFD for everybody onboard their vessels approaches one hundred percent.

## How Often Respondents Wear PFD

The majority ( $60.7 \%$ ) of the respondents to the 2009 LDWF Boaters Survey (Figure 3.6) claimed they wore PFD "always" or "most of the time." Approximately one-quarter (23.2\%) said they "rarely" or "never" wore them.

The language in the question related to reported PFD-wear rates used in the 2009 LDWF Recreational Boating Survey was copied exactly from the 2002 National Recreational Boating Survey. Despite the similarity in language, however, any comparison between the 2002 survey and the 2009 survey is complicated by the fact that the selection criteria for the two surveys differed. (The 2002 survey included boaters who used all sorts of boats. The 2009 survey was

Figure 3.6. How Often Respondents to the 2009 LDWF Boaters Survey Reported Wearing PFD When Boat Was Underway

administered primarily to people who registered and used motorboats.) Nevertheless, the reported PFD-wear rate among respondents to the 2009 LDWF Boaters Survey is higher than that reported in the 2002 National Recreational Boating Survey. Of the respondents to the 2009 survey, $60.7 \%$ claimed that they wore a PFD "always" or "most of the time" while only $47.6 \%$ of the respondents in Louisiana to the 2002 survey claimed to wear PFD "always" or "most of the time." (See Figure 3.4.)

Self-reported claims of PFD-wear rates must be interpreted with some caution. As noted above, trained researchers observing actual boating activity estimated that the 2004-2006 national PFD wear-rates among adults on power boats (excluding personal water craft) in the U.S. was 4.1\%, according to The National Life Jacket Wear Rate Observation Study, written by JSI Research and Training Institute, Inc., for the U.S. Coast Guard.

## Reasons Why Respondents Wore Personal Flotation Devices

Respondents' self-reported PFD-wear rates may at least reflect an awareness of the reasons to wear PFD and the circumstances when they are most needed. To learn more about boaters' motivations for wearing PFD, respondents were asked to identify why or when they did wear one (Figure 3.7). Over one-third of all respondents (36.6\%) claimed that they always wore PFD. Similar percentages claimed to wear them in rough weather (34.5\%) and when underway (33.9\%).

Approximately one-fifth of all respondents (21.9\%) claimed to wear PFD to serve as a good example for children onboard. Among those respondents who reported "always" or "frequently" taking a youth on boating trips (See Figure 2.14 on page 25), the percentage who wore PFD to serve as a good example for children was $37.3 \%$.

Figure 3.7. Reasons Why Respondents to the 2009 LDWF Boaters Survey Wore Personal Flotation Devices


## Reasons Why Respondents Did Not Wear Personal Flotation Devices

By the observation of boater activity and the admission of boaters themselves (in this and previous surveys), it is obvious that many boaters choose not to wear PFD at least part of the time when operating their vessels. To learn more about the reasons for not wearing PFD, the survey included a question that asked respondents to identify the reasons why they did not wear PFD (Figure 3.8).

Figure 3.8. Reasons Why Respondents to the 2009 LDWF Boaters Survey Did Not Wear Personal Flotation Devices


Over $30 \%$ of the respondents indicated that the question was not applicable, claiming that "they always wore one." When these individuals are excluded, the result is an adjusted sample of people who admitted not wearing PFD at least part of the time. Of this adjusted sample, $21.3 \%$ said that they did not wear PFD because the devices interfere with their activities. A slightly lower percentage (19.4\%) said they did not wear PFD when travelling at low speeds and $11.9 \%$ when travelling short distances. One-eighth (12.5\%) of the adjusted sample of respondents chose not to wear PFD because they found them uncomfortable and unattractive. Roughly $15 \%$ do not wear PFD because they believe that "they should not have to wear one." Nearly one-quarter gave some "other" reasons which are presented in Box 3.1. (The explanations offered by respondents as "other reasons for not wearing PFD" are written as the respondents who marked the "other" alternative wrote them. The repetition of a reason, such as, "too hot" means that more than one person provided that specific explanation. In some cases, the explanations may be similar to or identical to those given in the pre-existing categories included on the questionnaire.)
[The report text is continued on page 60.]

## Box 3.1. Other Reasons Cited by Respondents to the 2009 LDWF Boaters Survey as Reasons Why They Did Not Wear Personal Flotation Devices

- 22 pontoon boat
- 36-inch guardrails around the boat
- About 50 ft or less distance time, I don't ... very slow
- Always
- Always if by myself
- Always in calm water. Never underway in rough water.
- And if not traveling a long distance will not traveling fast.
- As an adult, I should have the right to choose!
- Because it's not the law
- Bad habit
- Boat is over 27 feet
- Boat is small
- Boat stopped, engine off and fishing.
- Boat was not used But I should wear one for my own safety
- Calm conditions
- Depends on weather
- Did not use boat
- Did not wear when fishing.
- Do not wear one when fishing. Hot and uncomfortable. I always wear one and required all passengers to wear one when outbound is running.
- Do not wear one when I'm fishing
- Do not wear one when not underway
- Do not wear one when stopped or idle
- Does not apply
- Don't wear one when I'm am inside marshes
- During rough water
- During daylight and calm weather
- Feel boat size and sleep determine if to wear.
- Feel safe without it. I can swim.
- Felt pontoon boat was safe.
- Felt safe
- Fishing
- Fishing with trolling motor being operated
- Forget
- Forget to put on
- Forgetfulness
- Forgot
- Good swimmer and not too deep waters
- Grew up only wearing them to small boats or at night
- Hard to drive with PFD on it uncomfortable.
- Hassle
- Have been there recently
- Have not developed the habit of wearing one.
- Hot
- Hot and uncomfortable but I always wear one when underway.
- Hot and uncomfortable
- Hot in the summer time.
- Hot, going short distance
- Hot, uncomfortable, type of boat - in generally were one in a boss boat, but not a boat or pontoon boat
- House boat
- I am a good swimmer
- I believe they limit mobility and could cause on accident, although I keep them in close reach.
- I do not keep a PFD on when I stop to fish.
- I do not like the new PFD tiller operated law. It should only apply to under 18 or 16 years of age.
- I do not wear a PFD when outboard is not running.
- I do not wear one if I am barely moving fishing
- I do not wear one when boat is stopped and I am fishing!
- I do not wear one when I am anchored fishing.
- I do not wear one while fishing or moving short distance from fishing spot to fish.
- I do not wear one while sitting still or trolling, fishing.
- I don't wear one when I'm stopped and fishing
- I don't wear one when the boat isn't moving
- I don't wear one while fishing.
- I don't wear one when I'm fishing!!!
- I feel that if I or anyone on my boat is unsafe, then everyone will wear one
- I fish the same lake all the time and usually alone. Don't it takes the time to put on
- I forget
- I have no reason, will probably start.
- I have one in the boat but do not wear it
- I just don't wear one.
- I keep PFD on board for all on board. Children under legal age do wear PFD at all times!
- I know how to swim, don't drive crazy.
- I now wear a PFD all of the time, but wore a PFD when boating alone!

Box 3.1. Other Reasons Cited by Respondents to the 2009 LDWF Boaters Survey as Reasons Why They Did Not Wear Personal Flotation Devices (Cont.)

- I simply don't want to
- I use a tether and harness
- I use common, if I feel I'm in somebody else has to make that decision for me.
- I usually sit on it or have it on
- I walk in front of boat, my gear inside.
- I wear a PFD. The only time is during activity, while boat [is] stop[ped]. Yes, it interferes and uncomfortable while fishing.
- I wear one as conditions dictate.
- I wear one when situations in my judgment requires one
- Ideal conditions
- If I am by myself.
- If I did not feel in danger!
- Inconvenient
- It depends if the water is deep.
- It is not necessary in this boat $24^{\prime}$
- Jet ski always/ 23 ' cc never but had one out Just a habit of not wearing one
- Jet ski $100 \%$. Boat $40 \%$
- Just did not want to!
- Just did not think of it.
- Just didn't
- Just don't
- Just don't, probably should.
- Just forgot when I remember, I put it on.
- Just stupid.
- Large boat - safe inside if I were on large water way or unfamiliar boats I would wear on it
- Lazy
- Little more difficult to operate with one on.
- Many PFDs are HOT to wear.
- Most fishing done on small lake.
- Move a short distance
- Moving slowly - short distance
- My boat has 4 HP engine and is not very fast at all but underage children wear one in my boat at all times.
- My boat has a high free board and protected passenger seating.
- Never used - boat too small
- No answer
- No good reasons

Box 3.1. Other Reasons Cited by Respondents to the 2009 LDWF Boaters Survey as Reasons Why They Did Not Wear Personal Flotation Devices (Cont.)

- No reason
- No reason - just do not
- Neglect
- None of government's business
- Not a habit to put one on.
- Not a law
- Not a law for adult
- Not enforced
- Not going long distance or fast
- Not in habit
- Not required for my boat
- Not the law
- Not worn when fishing and boat anchored
- Only in shallow water less than 3 ft
- Only need to wear one in rough section
- Only take off when stopped
- Only when fishing and hot weather
- Only when I am fishing.
- Only when stopped fishing
- Only when underway
- Operating a pontoon boat
- Party barge - top speed 20 mph
- PFD interfere with my ability to see my surroundings
- PFD's are hot: uncomfortable and bulky
- Pontoon
- Pontoon boat slow moving
- Private waters
- Raised on a boat used PFD in bad weather
- Removed PFD when motor is stopped
- Removed when fishing
- Shallow duck ponds
- Shallow water
- Short distance in calm water
- Short travels or travelling shows
- Short trips from dock to camp. Also, when idling.
- Skinny winter, calm waters, inland marsh
- Slow moving but 15-18 mph
- Small bayou

Box 3.1. Other Reasons Cited by Respondents to the 2009 LDWF Boaters Survey as Reasons Why They Did Not Wear Personal Flotation Devices (Cont.)

- Small wakes - low speeds
- Sometime I neglect to think of it
- Sometimes heat, wear one when moving short distance
- Sometimes I do not wear one when trolling.
- Sometimes I forget!
- Stop and trolling
- Stupidity
- Summer months (too hot to wear)
- Take it off while fishing and not running the motor.
- Take off to fish or hunt always on when underway.
- The law says I don't have to in my particular boat.
- The new types are too expensive. I always have a PFD when big motor is running.
- The prime reason I am not wearing PFD is it's hot and a short run with good visibility, no traffic, no kids, I know the water!
- They are too small.
- They're hot
- Too bulky
- Too hot
- Too hot
- Too hot
- Too hot and constructive - I am a good swimmer
- Too hot in the summer, wear one at all times in winter.
- Too hot!
- Too lazy to take the time
- Too much trouble to take off
- Top speed of boat under 8 mph
- Traveling at slow speed on party barge
- Type boat- [illegible] yacht with enclosed cabin
- Uncomfortable and too hot
- Unless waters are rough. Everyone that boards my boat is shown where the PFD are located. My grandson always wears one.
- Use in lakes, less than 200 ft from bank and shallow lakes
- Use kid fishing line
- Use kill switch
- Use trolling motor only for fishing do not leave one cover with average depth of 4 ft .
- Usually calm and short trips
- Usually travel slow and short distance
- Very open water, never rough condition

Box 3.1. Other Reasons Cited by Respondents to the 2009 LDWF Boaters Survey as Reasons Why They Did Not Wear Personal Flotation Devices (Cont.)

- Very short distance at idle
- Was fishing with trending motor
- We don't go very far when we don't operate the boat recklessly, and we don't go out in the bad weather, we can swim.
- Wear when underway
- When fishing
- When fishing and stopping
- When fishing I take it off
- When fishing with motor off
- When fishing
- When hunting out of boat or fishing when boat is not underway
- When I was fishing sometimes
- When I'm crabbing
- When I'm fishing or hunting
- When is not using overboard/ trolling motor
- When it is hot and boat motor is off
- When on private lease in shallow water at low speed.
- When stationary-fishing
- When stop to fish.
- When traveling and when traffic around
- When traveling point to point
- When using my trolling motor in calm water, canals, coves, and no other boating nearby
- When using troll motor
- When water is below 2 feet deep
- Whenever moving
- While fishing stop mode
- While fishing with another individual
- While fishing with black power
- While fishing, not underway
- While hunting
- While not under way and fishing
- While sitting on anchor
- With another adult on board, I did not wear any
- You should have included kill switch


## Respondents' Views of Laws Requiring Personal Flotation Device Use

As of July 1, 2009, all individuals under the age of 17 years old must wear a personal flotation device when onboard a vessel that is underway. Prior to July 1, 2009, only individuals thirteen years old and under were required by law to wear PFD when a vessel was underway. This survey contained three questions that asked the respondents to indicate their level of support for or opposition to the current regulation (mandatory use for those under 17), the past regulation (mandatory use for those under 13), and a hypothetical requirement that everybody must wear PFD when a vessel is underway.

Support for the requirement that those under 13 years old must wear PFD is very high; $94.1 \%$ strongly or moderately supported this regulation and only $3.5 \%$ strongly or moderately opposed it (Figure 3.9). Support for the current regulation that those under 17 must wear PFD declines significantly (Figure 3.10). Nevertheless, over three-quarters (75.6\%) strongly or moderately support this requirement. Ten percent strongly or moderately oppose it and $14 \%$ are neutral.

Support for a hypothetical regulation requiring all passengers (regardless of age) to wear PFD onboard a vessel when it is underway (Figure 3.11) is significantly lower than regulations requiring PFD-use for minors. Less than half (42.9\%) strongly or moderately support such a regulation. One in five is ambivalent (or neutral) and $36.9 \%$ oppose the requirement strongly or moderately.

Figure 3.9. Degree of Support for Law Requiring All Passengers 12 \& Under to Wear PFD among Respondents to the 2009 LDWF Boaters Survey


Figure 3.10. Degree of Support for Law Mandating PFD for Passengers 16 \& Under among Respondents to the 2009 LDWF Boaters Survey


Figure 3.11. Degree of Support for Law Requiring All Passengers (All Ages) to Wear PFD among Respondents to the LDWF Boaters Survey


Box 3.2. Patterns of Responses in the 2009 LDWF Boaters Survey's Subsamples
The survey sample was split to determine if the possession of additional information regarding the potential for PFD-use to reduce drowning during boat accidents had an effect on expressed support for the previously described regulations or proposals. A subsample of 1,000 received a questionnaire with the following information:
> "The U.S. Coast Guard estimates that $74 \%$ of all boating fatalities come from drowning. Experts believe that many of these fatalities could have been avoided if the victims had been wearing PFD's or life jackets."

The other subsample of 1,000 received a version of the questionnaire without that informational sentence.

There was no significant difference between the subsamples in the level of expressed support for or opposition to any of the regulations. Apparently, the provision of this additional information had no substantive effect on respondents' opinions regarding PFD-use.

## Boating Safety Enforcement Resources

The survey contained two questions related to the respondents' perceptions of and preferences for the deployment of boating safety enforcement resources. Though similar, the questions were intended to measure distinct views on the topic.

The first question sought to measure the degree of support for or opposition to increasing boating safety enforcement on the water. The survey did not specify if the increase would be accomplished by increasing the number of agents or shifting agent deployments from other duties to boating safety enforcement activities. Nor did it specify whether the increase should be accomplished by LDWF agents or agents of other agencies, such as local sheriff offices or the U.S. Coast Guard. No matter how achieved, there is strong support among boaters for more boating safety enforcement (Figure 3.12). Nearly three-quarters (72.1\%) strongly or moderately supported this concept. One-fifth were neutral and about eight percent were strongly or moderately opposed.

A second question asked respondents to indicate whether they thought there were too many LDWF agents dedicated to boating safety on the water, too few, or whether the number was about right. Respondents were also given a "not sure" alternative.

A plurality (42.4\%) thought that the number was about right (Figure 3.13). Almost onethird $(31.4 \%)$ thought there were too few. Less than four percent thought there were too many. Over one-fifth $(22.0 \%)$ of the respondents were unsure.

Figure 3.12. Degree of Support for Increasing Boating Safety Enforcement on the Water among Respondents to the 2009

LDWF Boaters Survey


Figure 3.13. Views Regarding the Number of LDWF Enforcement Agents Dedicated to Boating Safety Enforcement among Respodents to the 2009 LDWF Boaters Survey


Number of
Agents Is about
Right
42.4\%

Given the similarity between these two questions, there might be some correlation between respondents' answers for these survey items. Of the people who were moderately or strongly opposed to increasing boating safety enforcement and also provided an answer to the question regarding the number of agents, $6.9 \%$ thought there were too few agents, $20.8 \%$ thought there were too many, and $50.5 \%$ thought the number was about right. Of those who strongly or moderately supported increasing the number of agents, $38.9 \%$ said there were too few, $1.3 \%$ said there were too many, and $36.9 \%$ thought the number was about right.

## Respondents' Preferences for Allocating the Federal Fuel Tax

The survey also contained a question that sought to assess respondents' preferences regarding a hypothetical allocation of federal tax dollars collected from consumers' purchase of gasoline used for boating. The following statement was included on all questionnaires:

Currently fuel tax dollars collected from consumers' purchases of gasoline and diesel are directed to building and maintaining roads, bridges, and other highway projects. According to the Federal Highway Administration, a portion of the fuel tax dollars are collected from the purchase of gasoline used to operate boats and other aquatic vessels.

We would like you to consider some alternative ways to use or allocate the portion of fuel tax dollars that is collected from people operating boats and other aquatic vessels.

Respondents were provided with several alternative allocations of the federal fuel tax funds collected from boat fuel purchases:

1. To continue to use these funds for highway projects (the status quo);
2. To use some of these funds for highway projects but to allocate a portion to public waterway projects and boating safety efforts;
3. To direct all of these funds to a single-purposed uses related to boating: cleaning, repairing, and improving waterways;
4. To direct all of these funds to a single-purposed uses related to boating: boating safety efforts;
5. To direct all of these funds to multiple-purposed uses related to boating: boating safety efforts and cleaning, repairing, and improving public waterways;
6. To direct these funds to "other" purposes as specified by the respondents.

According to this survey (Figure 3.14), a small portion of Louisiana resident recreational boaters support the status quo use of federal fuel tax dollars derived from the purchase of gasoline and diesel used by boats. Approximately five percent (4.9\%) favored the continued use of such funds entirely for highway building and maintenance.

Approximately one-third (35.5\%) support the idea of using some of the funds for their current purposes (highways) but reallocating some portion of these federal fuel tax funds for boating safety enforcement and waterway improvements.

A majority of survey respondents, however, favor reallocating all of the federal fuel tax funds collected from boat fuel purchases away from highway projects to some boating-related purposes. Relatively small portions prefer some sort of single-purposed use, such as using all of the funds for improving public waterways $(11.3 \%)$ or using all of the funds for boating safety efforts (2.8\%). A plurality of all respondents (42.5\%) preferred multiple-purposed boating related-uses, including both waterway improvements and boating safety enforcement.

About three percent specified some "other" purposes which are presented in Box 3.3. (The suggested alternatives offered by respondents as "other" uses are written as the respondents who marked the "other" alternative wrote them. In some cases, the suggested alternative uses may be similar to or identical to those given in the pre-existing categories included on the questionnaire.)

Figure 3.14. Preferences among Respondents to the 2009 LDWF Boaters Survey for the Disposition of Federal Fuel Tax Collected from Boating


Box 3.3. "Other" Preferences for Reallocation of Federal Fuel Tax Dollars Specified by Respondents to the 2009 LDWF Boaters Survey

- All [illegible] should go to LDWF
- Aquatic plant control
- Aquatic weed control while the lakes and water ways can still be utilized and are accessible.
- Artificial reefs, improves marker buoy systems for safer navigation, use fight coastal erosion
- Build more free boat launches for the "Sportsman's Paradise State"! Think about how many launches Florida has! Remember tourists!
- Coastal erosion
- Do not charge for boat ramps
- Do not increase taxes, improve current system.
- Don't forget about the pockets, very deep pockets.
- Fight coastal erosion. Rebuild the wetlands!
- Fuel bought for vessels should go to public waterways. Taxes for fuel bought for land vehicle should go to public roads.
- Fuel for aquatic vessel should not be taxed the same.
- Fuel sold at boat docks should be highway tax free. Most are not this tax should be directed to use on the water projects
- Give boating portion back to public, we've obviously overpaid. In form of tax break for businesses.
- Improve waterway
- Keep public waterways clear and more agents patrolling waterways.
- Moneys should be allocated into the improvement of all Departments of Wildlife and Fisheries after all I do not mind paying for licenses and donating.
- More public boat ramps and access
- New boat owners should be required to respect other boats.
- No new tax or laws
- No way to tell separate boat taxes from vehicle taxes
- Not sure.
- Opportunity found as needed. It's not rocket science. Don't make it political.
- Opposed to fuel tax for boating
- Pay increase for WLF agents
- People who purchase boat should understand water laws as well as land! Laws a license operate boat with a motor when it is 15 hp should be required.
- Perhaps a boat credit card could be crated to direct taxes to water projects
- Quit taxing us
- Restore coastal erosion!!!


## Box 3.3. "Other" Preferences for Reallocation of Federal Fuel Tax Dollars Specified by Respondents to the 2009 LDWF Boaters Survey (Continued)

- Restoring wetlands and Mississippi River diversions
- Return to tax payer or use to impeach Obama, et. al.
- Support education
- Use for coastal erosion
- Use money collected in Parish for launches.
- Use most for highway projects and small portion for water way projects and small portion for boating safety
- Use some of the money to build and redo boat launches and clean up waterways.
- Use some to build more public boat ramps.
- Use these tax dollars to remove illegal gates and other obstacles from entrances to hunting and fishing areas
- Used to help clean the weed problems: under water structures
- You receive enough money for enforcement so just clean repair waterway


## Other Boating Resource Issues

The questionnaires contained three items pertaining to specific public waterway improvement of management practices. Respondents were asked to indicate their level of support for or opposition to improving aquatic weed control, cleaning up litter, and removing underwater debris. Each of these issues enjoyed large majorities of strong or moderate support.

Litter removal (Figure 3.15) had the highest measure of approval. Approximately 95\% moderately or strongly support enhanced litter removal efforts and only $2.3 \%$ strongly or moderately oppose them.

Removing underwater debris (which is a frequent boating safety hazard) has been a matter of special concern in Louisiana since Hurricanes Katrina and Rita in 2005. Among survey respondents (Figure 3.16), 86\% strongly or moderately support increasing efforts to remove underwater debris from Louisiana's waterways. Almost ten percent (9.6\%) are neutral and $4.5 \%$ are strongly or moderately opposed.

Figure 3.15. Degree of Support for Cleaning Up Litter In and Along Louisiana's Waterways among Respondents to the 2009 LDWF Boaters Survey


Figure 3.16. Degree of Support for Removing Underwater Debris from Louisiana's Waterways among Respondents to the 2009 LDWF Boaters Survey


Improving aquatic weed control is another matter of concern throughout Louisiana due to several instances of outbreaks of giant salvinia, water hyacinth, and other aquatic plants. Nearly four-fifths (79.9\%) moderately or strongly support improving aquatic weed control (Figure 3.17), about five percent strongly or moderately oppose such efforts, and $15.1 \%$ are neutral.

Figure 3.17. Degree of Support for Improving Aquatic Weed Control among Respondents to the 2009 LDWF Boaters Survey


## Conclusion

The Louisiana Department of Wildlife and Fisheries Recreational Boating Survey assisted the Department in compiling data that was not previously available. The LDWF has learned more about the vessels that its active resident boat registrants use on Louisiana's waterways: the length, horsepower, and steering mechanism, the purchase price and market value. The survey also examined where Louisiana resident boaters stored their vessels, a useful
variable, it turns out, because many boat owners do not keep their boat in the same parish in which the boat is registered.

This survey also uncovered more data about the recreational activities for which Louisiana's boat owners use their vessels. The LDWF has learned more about the number of days and trips Louisiana boat owners took, the purpose of those trips, the types of waters on which the boats were used, and the number of people onboard a vessel during a typical boating trip.

The survey also provided the LDWF with first-hand data regarding the public's use of PFD and preferences for selected boater safety enforcement rules and regulations. A higher percentage of respondents to this survey reported carrying PFD for everybody onboard their vessels than did the respondents to a survey of Louisiana recreational boaters conducted in 2002. Similarly, the percentage of claiming to wear PFD "always" or "most of the time" is higher than the percentage making those claims in the 2002 survey.

Among those who claimed to wear PFD at least part of the time when boating, the most common reasons for wearing them was because "the boat was underway" or because water conditions were rough. The highest percentages of those who admitted that they did not wear PFD all the time said that the main reasons that they did not wear them was because they are not travelling long distances or at high speeds. A good proportion of these respondents, however, said that they did not wear because they do not think they should have to do so which suggests that they may be resistant to policies requiring PFD use by all boaters.

Respondents expressed a high level of support for requiring minors to wear PFD when onboard vessels that are underway. There is a weaker degree of support and a stronger degree of opposition to a hypothetical regulation requiring adults to wear PFD as well. Though a plurality
$(43 \%)$ expressed strong or moderate support for mandatory PFD-use for boaters of all ages, roughly $36 \%$ were moderately or strongly opposed. A relatively small shift among the $20 \%$ who were neutral on this topic could provide a majority for opposition or support.

The majority of respondents support an increase in boating safety efforts on the water, though whether they preferred to achieve that increase by increasing the number of agents or shifting the deployment of agents is unclear from these results. The survey also revealed that there is strong support among respondents to improve aquatic weed control, litter removal efforts in and along waterways, and efforts to remove underwater debris.

## References:

Magione, Thomas, Mihaly Imre, Heather Parsons, and Brian Antionio. 2007 National Life Jacket Wear Rate Observational Study Final Report. JSI Research and Training Institute, Inc.: Boston, MA, March 31, 2008.

Magione, Thomas, Heather parsons, Mihaly Imre, and Brian Antonio. National Life Jacket Wear Rate Observational Study: State Report and Observational Materials. Presented at the NASBLA Annual Conference, Burlington, VT, September 10, 2007.

Strategic Research Group. 2002. National Recreational Boating Survey State Data Report. Columbus, OH, November 30, 2003.

## Appendix 1.

## Louisiana Department of Wildlife and Fisheries Recreational Boating Survey Questionnaire

1. How many motorboats used for recreational purposes did you own in 2009 ?
$\qquad$ Motorboats

## Boat Information for the Motorboat You Used Most Often for Recreational Purposes in the Past Twelve Months

2. Approximately how many trips did you take in the motorboat you used most often for recreational purposes in the past twelve months?

About $\qquad$ Trips
3. Approximately how many days did you use this boat in the past twelve months?

About $\qquad$ Days
4. What is the length of the motorboat you used most often for recreational purposes in the past twelve months?
$\qquad$ Feet
5. What is the steering mechanism on the motorboat you used most often for recreational purposes in the past twelve months? (Please circle your response)
A. Tiller operated
B. Stick operated
C. Steering Wheel operated
D. Other $\qquad$
6. What is the total horsepower of the engines used to operate this boat?
$\qquad$ Horsepower
7. What is your best estimate of the price you could sell this boat for if you were to sell it today?

## \$

$\qquad$
8. What was the original purchase price of this boat? (Please give your best estimate if you built the boat yourself or received it as a gift.)

## \$

$\qquad$
9. What year did you buy, build, or take ownership of this boat? $\qquad$
10. In what parish did you usually store this motorboat in the past twelve months?
$\qquad$
11. What activities did you use this boat for in the past twelve months? About what percentage of your trips with this boat did you use for each type of trip?
A. Recreational Fishing $\qquad$
$\qquad$ \%
B. Hunting $\qquad$
$\qquad$ \%
C. Commercial Fishing, Crabbing, Shrimping, etc. $\qquad$ \%
D. Skiing or Other Water Sports $\qquad$ \%
E. Recreational Boating (other than skiing or other water sports) .......__ $\%$
F. Other (Please specify: $\qquad$
12. When you used this boat, what type of water did you usually boat on most of the time? About what percentage of your trips with this boat were on each type of water?
A. Ponds or Other Private Waters $\qquad$ \%
B. Inland Waters or Freshwater $\qquad$
$\square$ \%
C. Saltwater, Marsh, and Brackish Waters ....... $\qquad$ \%
D. Offshore or Gulf $\qquad$ \%
13. When you used this boat, about how many people did you have onboard during a typical trip?

About $\qquad$ People
14. How often do you take youths (16 and under) with you when you use this boat? (Please circle your response.)
A. Always
B. Frequently
C. Sometimes
D. Rarely
E. Never
15. How many personal flotation devices ("PFD"), or life jackets, did you usually carry onboard? (Please circle your response.)
A. Enough for every passenger, including yourself
B. Enough for some passengers, but not everyone
C. I did not carry any personal flotation devices onboard
16. When this boat was underway, how often did you wear a life jacket or PFD? (Please circle your response.)
A. Always
B. Most of the time
C. Sometimes
D. Rarely
E. Never
17. When you did wear a PFD or life jacket, why or when did you wear one?
(Circle all that apply.)
A. Not applicable. I don't ever wear one.
B. I always wear one for safety
C. Rough weather conditions
D. Serve as a good example for children onboard
E. When I was underway
F. When out on open water
G. Other (Please specify): $\qquad$
18. If you did not always wear a PFD, why you did NOT wear one? (Circle all that apply.)
A. Not applicable. I always wear a PFD.
B. I do not wear one when I am not travelling a long distance
C. I do not wear one if I am not travelling fast
D. I do not think I should have to wear one
E. PFD are uncomfortable or unattractive
F. PFD interfere with the activity I'm engaged in
G. Other (Please specify):

## The United States Coast Guard estimates that $74 \%$ of all boating fatalities come from drowning. Experts believe that many of these fatalities could have been avoided if the victims had been wearing PFD's or life jackets.

19. We would like to know your opinion regarding the following seven items. Please indicate whether you are strongly opposed, moderately opposed, neutral, moderately supportive, or strongly supportive. (Please circle your response.)

|  |  |  | 電 |  |
| :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 |
| 1 | 2 | 3 | 4 | 5 |

20. Which of the following statements about the number of LDWF Law Enforcement Agents dedicated to Boating Safety Enforcement do you agree with the most? (Circle only one.)
A. There are too few LDWF agents out on the water dedicated to boating safety enforcement
B. The number of LDWF agents out on the water dedicated to boating safety enforcement is about right
C. There are too many agents out on the water dedicated to boating safety enforcement
D. I am not sure

Currently fuel tax dollars collected from consumers' purchases of gasoline and diesel are directed to the building and maintaining roads, bridges, and other highway projects. According to the Federal Highway Administration, a small portion of the fuel tax dollars are collected from purchases of gasoline used to operate boats and other aquatic vessels.

We would like you to consider some alternative ways to use or allocate the portion of fuel tax dollars that is collected from people operating boats and other aquatic vessels.

21 Which of the following alternative ways to use the portion of fuel tax dollars that comes from people operating boats and other aquatic vessel would you prefer?
A. Continue to use ALL of these tax dollars for road, bridge, and other highway projects
B. Use these tax dollars for cleaning, repairing, or improving public waterways
C. Use these tax dollars to fund boating safety efforts, such as enforcement, education, and outreach
D. Use these tax dollars for BOTH cleaning, repairing and improving public waterways AND boating safety efforts, such as enforcement, education, and outreach.
E. A combination of highway projects, public waterway projects, and boating safety efforts
F. Other $\qquad$

## Personal Characteristics

Please provide the following information to help us understand a little bit more about the people who go boating in Louisiana. All information will remain strictly confidential.
22. What is your home ZIP code?
23. What is your age? Years
24. What is your gender? (Please circle your response.)
A. Female
B. Male

## Appendix 2.

## House Concurrent Resolution 49

Regular Session, 2009

Regular Session, 2009
HOUSE CONCURRENT RESOLUTION NO. 49
BY REPRESENTATIVES RICHARDSON AND ST. GERMAIN

## A CONCURRENT RESOLUTION

To urge and request the Department of Wildlife and Fisheries to study the possibility of requiring all persons onboard a vessel to wear a personal flotation device.

WHEREAS, for 2007, United States Coast Guard statistics show that over two-thirds of all fatal boating accident victims drown, and of those, ninety percent were not wearing a life jacket; and

WHEREAS modern lifejackets are available in a wide variety of shapes, colors, and sizes, are thin and flexible, some are built right into fishing vests or hunter coats, some are inflatable and as compact as a scarf or fanny pack until they hit the water, when they automatically fill with air; and

WHEREAS, once and accident or collision event begins, there is little, if any, reaction time to properly don a personal flotation device; and

WHEREAS, personal flotation devices and motor vehicle safety belts are analogous safety equipment and current law requires the driver and front passengers to ear safety belts in a motor vehicle.

THEREFORE, BE IT RESOLVED that the Legislature of Louisiana does hereby urge and request the Department of Wildlife and Fisheries to study the possibility of requiring all persons aboard a vessel to wear a personal flotation device.

BE IT FURTHER RESOLVED that the Department of Wildlife and Fisheries shall make a written report to the House Committee on Natural Resources and Environment and the Senate Committee on Natural Resources of findings and make recommendations for any necessary legislation prior to the 2010 Regular Session.

BE IT FURTHER RESOLVED that a copy of this Resolution be transmitted to the secretary of the Department of Wildlife and Fisheries.

## Appendix 3.

Characteristics of Boats and Boating Use by Boat Storage Location in Coastal Parishes among Respondents to the 2009 LDWF Boaters Survey

## Descriptive Statistics of Boat Characteristics and Boat Use by Boat Storage Location in Coastal Parishes among Respondents to the 2009 LDWF Boaters Survey Stored in Coastal Parishes

The 2009 LDWF Boaters Survey collected information pertaining to the boat that the holders of Louisiana recreational boat registrations used most frequently. In Section 2 of this report, descriptive statistics are presented at the statewide and regional levels for tenure of ownership (years owned), purchase price, estimated current market value, vessel length, horsepower, boating days and trips, and participation rates and usage of the boat by water type and activity categories.

Following the MS Canyon 252 incident of April 20, 2010, there arose a need for more detailed information related to recreational boat use for coastal Louisiana. Thus, descriptive statistics were generated based on the coastal parishes in which respondents reported storing the boats that they used most frequently. This geographic designation is employed here rather than the respondents' places of residence in part because the 2009 LDWF Boaters Survey indicated that approximately eighteen percent (18\%) of survey respondents stored their boats in parishes other than the parish in which they resided. Though it is probable that boats are more likely to be used in or near the vicinity in which the vessels are stored rather than the vicinity where the registration holder resides, one should be careful to avoid assuming that the boats stored within the coastal parishes are necessarily used in the parish in which they are stored.

In several instances, the number of respondents who stored their boats in specific parishes was too small to support reliable statistical analysis: Cameron (9), Iberia (26), Orleans (18), Plaquemines (23), Saint Bernard (8), Saint Charles (15), Saint Mary (29), and Vermilion (27). In such cases, parishes were combined with adjacent or neighboring parishes to create subsample sizes more conducive to reliable statistical analysis.

Among Respondents Who Stored the Boat They Used Most Frequently in Calcasieu Parish

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Total Number of Boats Owned | 57 | 1.56 | 1 | 0.907 |

## Characteristics of the Boats Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Tenure of Ownership (Years) | 56 | 7.89 | 6 | 8.50 |
| Purchase Price | 57 | $\$ 11,250.53$ | $\$ 10,500$ | $9,689.28$ |
| Market Value | 57 | $\$ 6,566.67$ | $\$ 4,000$ | $5,757.61$ |
| Length of Boat | 55 | 17.65 | 17 | 2.90 |
| Horsepower | 55 | 93.69 | 88 | 67.16 |
| Percentage of Boats with a Steering Wheel Operated Steering Mechanisms |  |  |  | $66.67 \%$ |
| Percentage of Respondents Who Reside in Calcasieu Parish |  |  |  | $97.74 \%$ |


| Trip Characteristics on the Boat Respondents Used Most Frequently |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Observations | Average | Median | Standard Deviation |
| Total Number of Days |  | 55 | 25.09 | 12 | 34.27 |
| Total Number of Trips |  | 57 | 20.74 | 12 | 23.51 |
| 苞 | Number of Trips on Ponds | 57 | 0.44 | 0 | 3.11 |
|  | Number of Trips on Freshwater | 57 | 7.90 | 2.5 | 12.33 |
|  | Number of Trips on Saltwater | 57 | 11.8 | 0 | 19.02 |
|  | Number of Trips in Gulf | 57 | 0.43 | 0 | 1.55 |
|  | Number of Recreational Fishing Trips | 57 | 16.77 | 9.6 | 23.42 |
|  | Number of Hunting Trips | 56 | 0.679 | 0 | 4.81 |
|  | Number of Commercial Trips | 56 | 0.424 | 0 | 1.67 |
|  | No. of Skiing or Other Water Sports Trips | 56 | 2.26 | 0 | 13.37 |
|  | Number of Boat Touring Trips | 56 | 1.98 | 0 | 6.10 |
|  | Number of Other Types of Trips | 56 | 0.54 | 0 | 4.01 |
| Number of People Onboard During a Typical Trip |  | 57 | 2.46 | 2 | 0.927 |


| Percent of Respondents Who Used Their Most Frequently Used Boat for ... |  |  |
| :---: | :---: | :---: |
|  | Trips on Ponds | 1.8\% |
|  | Trips on Freshwater | 70.2\% |
|  | Trips on Saltwater | 66.67\% |
|  | Trips in Gulf | 12.3\% |
|  | Recreational Fishing Trips | 91.2\% |
|  | Hunting Trips | 5.4\% |
|  | Commercial Trips | 8.9\% |
|  | Skiing or Other Water Sports Trips | 17.9\% |
|  | Boat Touring Trips | 25.0\% |
|  | Other Types of Trips | 3.6\% |

## Among Respondents Who Stored the Boat They Used Most Frequently in Cameron or Vermilion Parish

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Total Number of Boats Owned | 34 | 1.91 | 2 | 1.16 |

## Characteristics of the Boats Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Tenure of Ownership (Years) | 34 | 5.68 | 5 | 5.64 |
| Purchase Price | 35 | $\$ 10,768.57$ | $\$ 7,000$ | $12,312.52$ |
| Market Value | 34 | $\$ 8,567.12$ | $\$ 5,000$ | $10,494.12$ |
| Length of Boat (Feet) | 35 | 17.71 | 17 | 3.10 |
| Horsepower | 35 | 99.09 | 70 | $12,312.52$ |
| Percentage of Boats with a Steering Wheel Operated Steering Mechanisms |  |  |  |  |
| Percentage of Respondents Who Reside in Cameron or Vermilion Parish | $77.14 \%$ |  |  |  |

Trip Characteristics on the Boat Respondents Used Most Frequently

|  |  | Observations | Average | Median | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total Number of Days |  | 34 | 34.59 | 10 | 53.74 |
| Total Number of Trips |  | 34 | 26.74 | 8 | 45.78 |
| $\stackrel{\text { du }}{\substack{0}}$ | Number of Trips on Ponds | 34 | 1.12 | 0 | 6.01 |
|  | Number of Trips on Freshwater | 34 | 7.95 | 0 | 21.63 |
|  | Number of Trips on Saltwater | 34 | 16.98 | 4.85 | 29.14 |
|  | Number of Trips in Gulf | 34 | 0.64 | 0 | 2.62 |
|  | Number of Recreational Fishing Trips | 34 | 20.44 | 6 | 44.24 |
|  | Number of Hunting Trips | 34 | 3.65 | 0 | 10.63 |
|  | Number of Commercial Trips | 34 | 3.58 | 0 | 20.57 |
|  | No. of Skiing or Other Water Sports Trips | 34 | 0.89 | 0 | 4.04 |
|  | Number of Boat Touring Trips | 34 | 0.67 | 0 | 1.61 |
|  | Number of Other Types of Trips | 33 | 1.28 | 0 | 6.96 |
| Number of People Onboard During a Typical Trip |  | 35 | 2.77 | 2 | 1.63 |


| Percent of Respondents Who Used Their Most Frequently Used Boat for ... |  |  |
| :---: | :---: | :---: |
|  | Trips on Ponds | 5.71\% |
|  | Trips on Freshwater | 54.29\% |
|  | Trips on Saltwater | 68.57\% |
|  | Trips in Gulf | 14.29\% |
|  | Recreational Fishing Trips | 77.14\% |
|  | Hunting Trips | 25.71\% |
|  | Commercial Trips | 8.57\% |
|  | Skiing or Other Water Sports Trips | 17.14\% |
|  | Boat Touring Trips | 22.86\% |
|  | Other Types of Trips | 8.57\% |


|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Total Number of Boats Owned | 55 | 2.02 | 2 | 1.13 |

## Characteristics of the Boats Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Tenure of Ownership (Years) | 53 | 9.98 | 10 | 7.67 |
| Purchase Price | 53 | $\$ 16,167.92$ | $\$ 9,000$ | $20,417.6$ |
| Market Value | 52 | $\$ 12,309.62$ | $\$ 6,750$ | $14,844.10$ |
| Length of Boat | 53 | 18.40 | 17 | 4.46 |
| Horsepower | 53 | 124.67 | 115 | 104.52 |
| Percentage of Boats with a Steering Wheel Operated Steering Mechanisms |  |  |  |  |
| Percentage of Respondents Who Reside in Iberia or Saint Mary Parish | $77.78 \%$ |  |  |  |

Trip Characteristics on the Boat Respondents Used Most Frequently

|  |  | Observations | Average | Median | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Total Number of Days |  | 55 | 32.95 | 16 | 50.47 |
| Total Number of Trips |  | 55 | 27.71 | 12 | 43.25 |
| $\overbrace{i=1}^{\stackrel{y}{n}}$ | Number of Trips on Ponds | 54 | 1.75 | 0 | 11.03 |
|  | Number of Trips on Freshwater | 54 | 14.72 | 5.9 | 2.41 |
|  | Number of Trips on Saltwater | 54 | 10.52 | 2.41 | 19.16 |
|  | Number of Trips in Gulf | 54 | 0.76 | 0 | 3.16 |
|  | Number of Recreational Fishing Trips | 54 | 10.82 | 6 | 13.14 |
|  | Number of Hunting Trips | 54 | 9.33 | 0 | 24.88 |
|  | Number of Commercial Trips | 54 | 0.53 | 0 | 3.11 |
|  | No. of Skiing or Other Water Sports Trips | 54 | 0.64 | 0 | 2.17 |
|  | Number of Boat Touring Trips | 54 | 5.55 | 0 | 24.71 |
|  | Number of Other Types of Trips | 54 | 1.26 | 0 | 8.22 |
| Number of People Onboard During a Typical Trip |  | 54 | 2.78 | 2 | 1.30 |


| Percent of Respondents Who Used Their Most Frequently Used Boat for ... |  |  |
| :---: | :---: | :---: |
|  | Trips on Ponds | 3.70\% |
|  | Trips on Freshwater | 74.07\% |
|  | Trips on Saltwater | 61.11\% |
|  | Trips in Gulf | 14.81\% |
|  | Recreational Fishing Trips | 79.63\% |
|  | Hunting Trips | 42.59\% |
|  | Commercial Trips | 5.56\% |
|  | Skiing or Other Water Sports Trips | 11.11\% |
|  | Boat Touring Trips | 33.33\% |
|  | Other Types of Trips | 5.56\% |


|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Total Number of Boats Owned | 58 | 1.64 | 1 | 1.09 |

## Characteristics of the Boats Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Tenure of Ownership (Years) | 58 | 7.57 | 6 | 7.14 |
| Purchase Price | 58 | $\$ 15,728.62$ | $\$ 10,000$ | $16,823.12$ |
| Market Value | 56 | $\$ 8,591.79$ | $\$ 6,000$ | $8,034.52$ |
| Length of Boat (Feet) | 58 | 17.31 | 16.5 | 2.73 |
| Horsepower | 58 | 100.5 | 90 | 68.11 |
| Percentage of Boats with a Steering Wheel Operated Steering Mechanisms |  |  |  |  |
| Percentage of Respondents Who Reside in Terrebonne Parish |  |  |  |  |

Trip Characteristics on the Boat Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: |
| Total Number of Days | 57 | 29.53 | 15 | 46.03 |
| Total Number of Trips | 58 | 30.03 | 12 | 55.27 |
| Number of Trips on Ponds | 58 | 1.04 | 0 | 7.88 |
| 馬 Number of Trips on Freshwater | 58 | 3.90 | 1 | 7.25 |
| $\underset{\sim}{\sim}$ Number of Trips on Saltwater | 58 | 23.36 | 6.6 | 53.50 |
| $\infty$ Number of Trips in Gulf | 58 | 2.32 | 0 | 8.92 |
|  |  |  |  |  |
| Number of Recreational Fishing Trips | 58 | 18.00 | 7.8 | 28.51 |
| ® $\quad$ Number of Hunting Trips | 58 | 2.59 | 0 | 7.17 |
| Number of Commercial Trips | 58 | 10.76 | 0 | 50.95 |
| No. of Skiing or Other Water Sports Trips | 58 | 1.15 | 0 | 7.88 |
| 会 | 58 | 0.301 | 0 | 1.02 |
| Number of Other Types of Trips | 58 | 0.014 | 0 | 0.105 |
| Number of People Onboard During a Typical Trip | 58 | 2.42 | 2 | 1.08 |


| Percent of Respondents Who Used Their Most Frequently Used Boat for ... |  |  |
| :---: | :---: | :---: |
|  | Trips on Ponds | 3.44\% |
|  | Trips on Freshwater | 62.07\% |
|  | Trips on Saltwater | 81.03\% |
|  | Trips in Gulf | 15.52\% |
|  | Recreational Fishing Trips | 81.04\% |
|  | Hunting Trips | 20.69\% |
|  | Commercial Trips | 5.17\% |
|  | Skiing or Other Water Sports Trips | 8.62\% |
|  | Boat Touring Trips | 18.97\% |
|  | Other Types of Trips | 1.72\% |


|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Total Number of Boats Owned | 44 | 1.64 | 1 | 0.92 |

## Characteristics of the Boats Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Tenure of Ownership (Years) | 45 | 6.44 | 5 | 5.30 |
| Purchase Price | 45 | $\$ 14,515.91$ | $\$ 8,750$ | $22,862.93$ |
| Market Value | 45 | $\$ 7,897.78$ | $\$ 6,000$ | $6,651.20$ |
| Length of Boat (Feet) | 44 | 17.93 | 17 | 3.25 |
| Horsepower | 45 | 100.13 | 70 | 84.96 |
| Percentage of Boats with a Steering Wheel Operated Steering Mechanisms |  |  |  |  |
| Percentage of Respondents Who Reside in Lafourche Parish |  |  |  |  |

Trip Characteristics on the Boat Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: |
| Total Number of Days | 44 | 25.98 | 12.5 | 30.33 |
| Total Number of Trips | 45 | 23.58 | 12 | 30.33 |
| - Number of Trips on Ponds | 45 | 2.30 | 0 | 12.94 |
| 艺 Number of Trips on Freshwater | 45 | 9.90 | 2.5 | 25.14 |
| $\underset{\sim}{\sim}$ Number of Trips on Saltwater | 45 | 9.05 | 6 | 11.46 |
| ¢ Number of Trips in Gulf | 45 | 1.44 | 0 | 6.45 |
|  |  |  |  |  |
| Number of Recreational Fishing Trips | 45 | 12.80 | 8.55 | 16.29 |
| $\pm \pm$ Number of Hunting Trips | 45 | 4.17 | 0 | 11.80 |
| Number of Commercial Trips | 45 | 0.40 | 0 | 1.62 |
| No. of Skiing or Other Water Sports Trips | 45 | 1.08 | 0 | 4.60 |
| - $\sim$ Number of Boat Touring Trips | 45 | 3.75 | 0 | 21.27 |
| Number of Other Types of Trips | 45 | 0.11 | 0 | 0.71 |
| Number of People Onboard During a Typical Trip | 45 | 2.60 | 2 | 1.05 |


| Percent of Respondents Who Used Their Most Frequently Used Boat for ... |  |  |
| :---: | :---: | :---: |
|  | Trips on Ponds | 11.11\% |
|  | Trips on Freshwater | 62.22\% |
|  | Trips on Saltwater | 75.56\% |
|  | Trips in Gulf | 15.56\% |
|  |  |  |
|  | Recreational Fishing Trips | 91.10\% |
|  | Hunting Trips | 22.22\% |
|  | Commercial Trips | 13.33\% |
|  | Skiing or Other Water Sports Trips | 20.00\% |
|  | Boat Touring Trips | 22.22\% |
|  | Other Types of Trips | 4.44\% |


|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Total Number of Boats Owned | 98 | 1.63 | 1 | 1.18 |

## Characteristics of the Boats Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Tenure of Ownership (Years) | 97 | 8.64 | 6 | 7.85 |
| Purchase Price | 97 | $\$ 17,265.95$ | $\$ 15,000$ | $15,511.39$ |
| Market Value | 95 | $\$ 12,375.79$ | $\$ 8,000$ | $13,388.66$ |
| Length of Boat (Feet) | 98 | 18.92 | 18 | 3.99 |
| Horsepower | 96 | 132.38 | 120 | 101.74 |
| Percentage of Boats with a Steering Wheel Operated Steering Mechanisms |  |  |  |  |
| Percentage of Respondents Who Reside in Parish |  |  |  |  |

Trip Characteristics on the Boat Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: |
| Total Number of Days | 98 | 22.16 | 10 | 30.09 |
| Total Number of Trips | 98 | 19.65 | 10 | 30.55 |
| Number of Trips on Ponds | 98 | 0.67 | 0 | 3.81 |
| 馬 Number of Trips on Freshwater | 98 | 5.35 | 0 | 22.05 |
| $\underset{\sim}{\sim}$ Number of Trips on Saltwater | 98 | 12.66 | 6 | 22.23 |
| $\infty$ Number of Trips in Gulf | 98 | 0.86 | 0 | 4.02 |
|  |  |  |  |  |
| Number of Recreational Fishing Trips | 97 | 16.02 | 7.5 | 30.44 |
| ® $\quad$ Number of Hunting Trips | 98 | 0.99 | 0 | 3.07 |
| Number of Commercial Trips | 98 | 0.62 | 0 | 4.44 |
| No. of Skiing or Other Water Sports Trips | 98 | 1.05 | 0 | 5.00 |
| 会 | 98 | 2.17 | 0 | 15.31 |
| Number of Other Types of Trips | 98 | 0 | 0 | 0 |
|  |  |  |  |  |
| Number of People Onboard During a Typical Trip | 98 | 2.76 | 3 | 1.16 |


| Percent of Respondents Who Used Their Most Frequently Used Boat for ... |  |  |
| :---: | :---: | :---: |
|  | Trips on Ponds | 8.16\% |
|  | Trips on Freshwater | 34.69\% |
|  | Trips on Saltwater | 83.68\% |
|  | Trips in Gulf | 15.31\% |
|  | R | 88.00\% |
|  | Hunting Trips | 17.35\% |
|  | Commercial Trips | 4.08\% |
|  | Skiing or Other Water Sports Trips | 15.31\% |
|  | Boat Touring Trips | 24.49\% |
|  | Other Types of Trips | 0.00\% |

## Among Respondents Who Stored the Boat They Used Most Frequently in Orleans or Saint Charles

 Parish|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Total Number of Boats Owned | 31 | 1.32 | 1 | 0.65 |

## Characteristics of the Boats Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Tenure of Ownership (Years) | 30 | 7.73 | 3.5 | 8.19 |
| Purchase Price | 30 | $\$ 10,916.13$ | $\$ 10,000$ | $8,604.07$ |
| Market Value | 31 | $\$ 7,426.67$ | $\$ 6,000$ | $6,238.09$ |
| Length of Boat (Feet) | 32 | 17.25 | 17.50 | 2.75 |
| Horsepower | 31 | 99.65 | 90 | 60.45 |
| Percentage of Boats with a Steering Wheel Operated Steering Mechanisms |  |  |  |  |
| Percentage of Respondents Who Reside in Orleans or Saint Charles Parish |  |  |  | $81.25 \%$ |

## Trip Characteristics on the Boat Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: |
| Total Number of Days | 32 | 18.78 | 17.25 | 17.62 |
| Total Number of Trips | 32 | 19.91 | 12.5 | 18.95 |
| 边 $\quad$ Number of Trips on Ponds | 32 | 0.44 | 0 | 2.47 |
| 艺 | 32 | 5.80 | 0 | 12.97 |
| $\underset{\sim}{\sim}$ Number of Trips on Saltwater | 32 | 13.20 | 9 | 17.80 |
| $\wedge$ Number of Trips in Gulf | 32 | 0.47 | 0 | 2.22 |
| Number of Recreational Fishing Trips | 32 | 15.59 | 9.5 | 19.12 |
| $\pm \pm$ Number of Hunting Trips | 32 | 1.89 | 0 | 5.93 |
| Number of Commercial Trips | 32 | 0.63 | 0 | 0.35 |
| No. of Skiing or Other Water Sports Trips | 32 | 0.58 | 0 | 1.58 |
| - $\sim$ Number of Boat Touring Trips | 32 | 2.10 | 0 | 2.10 |
| Number of Other Types of Trips | 32 | 4.51 | 0 | 4.51 |
|  |  |  |  |  |
| Number of People Onboard During a Typical Trip | 31 | 2.48 | 2 | 0.962 |


| Percent of Respondents Who Used Their Most Frequently Used Boat for ... |  |  |
| :---: | :---: | :---: |
|  | Trips on Ponds | 3.13\% |
|  | Trips on Freshwater | 40.63\% |
|  | Trips on Saltwater | 84.38\% |
|  | Trips in Gulf | 12.50\% |
|  |  |  |
|  | Recreational Fishing Trips | 96.88\% |
|  | Hunting Trips | 15.63\% |
|  | Commercial Trips | 3.13\% |
|  | Skiing or Other Water Sports Trips | 15.63\% |
|  | Boat Touring Trips | 34.38\% |
|  | Other Types of Trips | 3.13\% |


|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Total Number of Boats Owned | 31 | 1.42 | 1 | 0.72 |

## Characteristics of the Boats Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Tenure of Ownership (Years) | 31 | 7.65 | 7 | 7.37 |
| Purchase Price | 31 | $\$ 18,074.19$ | $\$ 17,000$ | $13,690.39$ |
| Market Value | 31 | $\$ 11,006.45$ | $\$ 10,000$ | $9,336.88$ |
| Length of Boat (Feet) | 31 | 18.77 | 19 | 3.33 |
| Horsepower | 31 | 132.84 | 115 | 72.65 |
| Percentage of Boats with a Steering Wheel Operated Steering Mechanisms |  |  |  | $83.87 \%$ |
| Percentage of Respondents Who Reside in Plaquemines or Saint Bernard Parish |  |  |  |  |

Trip Characteristics on the Boat Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: |
| Total Number of Days | 31 | 21.87 | 15 | 21.78 |
| Total Number of Trips | 31 | 17 | 12 | 13.72 |
| Number of Trips on Ponds | 31 | 0.016 | 0 | 0.089 |
| 馬 Number of Trips on Freshwater | 31 | 1.14 | 0 | 2.42 |
| $\underset{\sim}{\text { ® }}$ Number of Trips on Saltwater | 31 | 14.03 | 8 | 13.65 |
| $\sim$ Number of Trips in Gulf | 31 | 1.81 | 0 | 5.60 |
| Number of Recreational Fishing Trips | 31 | 14.49 | 12 | 13.81 |
| $\pm \sim$ Number of Hunting Trips | 31 | 0.35 | 0 | 1.05 |
| Number of Commercial Trips | 31 | 0.31 | 0 | 1.71 |
| N No. of Skiing or Other Water Sports Trips | 31 | 1.17 | 0 | 4.26 |
| ¢ $\sim$ Number of Boat Touring Trips | 31 | 0.46 | 0 | 1.59 |
| Number of Other Types of Trips | 31 | 0.06 | 0 | 0.36 |
|  |  |  |  |  |
| Number of People Onboard During a Typical Trip | 31 | 2.55 | 3 | 85.00 |


| Percent of Respondents Who Used Their Most Frequently Used Boat for ... |  |  |
| :---: | :---: | :---: |
|  | Trips on Ponds | 3.23\% |
|  | Trips on Freshwater | 25.81\% |
|  | Trips on Saltwater | 83.87\% |
|  | Trips in Gulf | 25.81\% |
|  | Recreational Fishing Trips | 90.32\% |
|  | Hunting Trips | 12.90\% |
|  | Commercial Trips | 3.23\% |
|  | Skiing or Other Water Sports Trips | 16.13\% |
|  | Boat Touring Trips | 12.90\% |
|  | Other Types of Trips | 3.23\% |


|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Total Number of Boats Owned | 73 | 1.44 | 1 | 0.62 |

## Characteristics of the Boats Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :--- | :---: | :---: | :---: | :---: |
| Tenure of Ownership（Years） | 73 | 7.60 | 5 | 8.08 |
| Purchase Price | 72 | $\$ 27,583.26$ | $\$ 15,750$ | $57,346.32$ |
| Market Value | 72 | $\$ 16,491.67$ | $\$ 9,500$ | $28,063.88$ |
| Length of Boat（Feet） | 72 | 19.15 | 19 | 5.49 |
| Horsepower | 70 | 151.07 | 130 | 133.44 |
| Percentage of Boats with a Steering Wheel Operated Steering Mechanisms |  |  |  |  |
| Percentage of Respondents Who Reside in Saint Tammany Parish | $86.11 \%$ |  |  |  |

Trip Characteristics on the Boat Respondents Used Most Frequently

|  | Observations | Average | Median | Standard Deviation |
| :---: | :---: | :---: | :---: | :---: |
| Total Number of Days | 74 | 21.97 | 12.50 | 29.57 |
| Total Number of Trips | 74 | 18.86 | 12 | 25.64 |
| Number of Trips on Ponds | 74 | 0.41 | 0 | 2.82 |
| 馬 范 Number of Trips on Freshwater | 74 | 4.92 | 0.2 | 14.59 |
| $\underset{\sim}{\text { N }}$ Number of Trips on Saltwater | 74 | 13.18 | 6 | 21.75 |
| ¢ $\sim$ Number of Trips in Gulf | 74 | 0.36 | 0 | 1.91 |
| Number of Recreational Fishing Trips | 74 | 14.26 | 6 | 25.86 |
| $\pm \sim$ Number of Hunting Trips | 74 | 0.88 | 0 | 2.69 |
| Number of Commercial Trips | 74 | 0.34 | 0 | 1.89 |
| No．of Skiing or Other Water Sports Trips | 74 | 0.89 | 0 | 2.09 |
| 聱 Number of Boat Touring Trips | 74 | 2.22 | 0 | 5.45 |
| Number of Other Types of Trips | 74 | 0.16 | 0 | 1.39 |
| Number of People Onboard During a Typical Trip | 74 | 3 | 3 | 1.54 |


| Percent of Respondents Who Used Their Most Frequently Used Boat for ．．． |  |  |
| :---: | :---: | :---: |
| 范 | Trips on Ponds | 5．41\％ |
|  | Trips on Freshwater | 55．41\％ |
|  | Trips on Saltwater | 72．97\％ |
|  | Trips in Gulf | 8．11\％ |
|  |  |  |
|  | Recreational Fishing Trips | 81．08\％ |
|  | Hunting Trips | 13．50\％ |
|  | Commercial Trips | 5．41\％ |
|  | Skiing or Other Water Sports Trips | 22．97\％ |
|  | Boat Touring Trips | 36．49\％ |
|  | Other Types of Trips | 2．70\％ |

