

SWAMP TOURS IN LOUISIANA POST HURRICANE KATRINA AND HURRICANE RITA

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Abstract.—Hurricanes Katrina and Rita made landfall in southern Louisiana during August and September 2005. Prior to these storms, swamp tours were a growing sector of nature-based tourism that entertained visitors while teaching about local flora, fauna, and culture. This study determined post-hurricane operating status of tours, damage sustained, and repairs made. Differences between tours that remained open after the hurricanes and those that closed were examined. A three-phase mail survey was used to collect data, with a response rate of 74%. The most common damages reported were loss of telephone service and damage to the swamp. Fewer tourists were also a problem for swamp tours. More swamp tours operating for 15 years or more remained open after the storms than those operating for less than 15 years. This study also found that a new tour, the New Orleans disaster tour, is being offered by four swamp tour businesses.

1.0 INTRODUCTION

1.1 Tourism

Tourism is the second largest industry in the state of Louisiana and is very important to the state's economy (LADCRT 2004). During 2003, more than 21 million people visited Louisiana spending over \$9.4 billion in the state and more than 120,000 people were employed by the tourism industry. For 2005, tourism revenue was expected to top \$10 billion and 7,000 new jobs were expected in the industry (LADCRT 2004). Nature-based tourism is an important segment of the Louisiana tourism industry. In 2001, visitors to Louisiana spent \$168 million on wildlife watching alone (USDOI 2001). The state supports many types of nature-based tourism activities, including: swamp tours, hunting, hiking, recreational boating, recreational fishing, camping,

state parks, bird watching, scenic drives, and golfing (LADCRT 2004).

According to the Louisiana Department of Culture, Recreation, and Tourism (LAD CRT) (2004), Louisiana is continually thinking of new ways to draw attention to the many sites and activities that are unique to the area. The state is making "strategic investments in developing eco-cultural and heritage tourism" and "will continue to grow an important segment of Louisiana tourism" (LADCRT 2004). The report also discussed nature-based programs on which the state was focusing, such as the America's Wetland Initiative and the Louisiana African American Heritage Trail, and how these and other similar programs are important components of their "vision to brand Louisiana as the pre-eminent heritage and ecotourism destination in the world" (LADCRT 2004).

1.2 Hurricanes Katrina and Rita

The occurrence of Hurricane Katrina August 29, 2005, a strong category 4 storm that made landfall twice in southeastern Louisiana, caused extensive loss of life and property damage to the Louisiana coast (NOAA 1 2005). The National Oceanographic and Atmospheric Administration (2005) called Hurricane Katrina, "one of the most devastating natural disasters in recent US history." The tourism industry was one of many industries in Louisiana to suffer as a result of this storm. The city of New Orleans, a major tourist center, suffered severe damage due to strong winds, heavy rainfall, and storm surge as well as flooding caused by levee breaches (NOAA 1 2005). The Louisiana Gulf Coast was further damaged on September 24, 2005, when Hurricane Rita, a category 3 storm, made landfall near the Texas/Louisiana border. Although the storm made landfall in southwestern Louisiana, it caused significant damage along the entire Louisiana coast and further impacted those areas already distressed by Hurricane Katrina. (NOAA 2 2005). Hurricanes Katrina and Rita and the damage they caused to southern Louisiana's many natural areas no doubt affected the LADCRT's 2004 plans for nature-based tourism. However, even though the state's main focus directly after the storms was trying to ensure

the safety of its citizens, how the storm would affect the tourism industry was still an important issue.

On September 20, 2005, the LAD CRT released its new four-point plan to rebuild Louisiana's tourism and cultural industries, called *Louisiana Rebirth: Restoring the Soul of America*. The points of the new plan are as follows:

1. Rebuild Louisiana to worldwide preeminence as a top tourist destination.
2. Make Louisiana's cultural economy the engine of economic and social rebirth.
3. Build better lives and livelihoods than before for all Louisiana's people.
4. Make Louisiana's recovery the standard for high performance, accountability, and ethical behavior.

The new plan recognized that Hurricane Katrina was the largest disaster Louisiana has ever experienced and that the loss of human lives, separation of families, and destruction of communities and property will never be forgotten. The plan also acknowledged that Louisiana now has the opportunity to rebuild to a better condition while demonstrating that the state is capable of response, rebuilding, and reconciliation. Although this plan was created prior to Hurricane Rita, it was amended to include areas damaged by the storm (LADCRT 2005).

1.3 Swamp Tours in Louisiana

There has been one previous study on swamp tour businesses in Louisiana. O'Mara et al. (1998) felt that a new type of tourist was emerging, one who was searching for unique experiences he/she could not get at home and that the tourism industry would continue to develop into different specialty areas to appeal to them. For the purpose of their study, nature-based tourism was defined as a "specialty area that provides a tourist with an up-close encounter with natural beauty and cultural uniqueness" (O'Mara et al. 1998). When they conducted their study, nature-based tourism businesses were becoming popular in coastal Louisiana parishes that were seeking economic enhancement while protecting their natural and cultural resources; the economic gains of these parishes also contributed to the economy of the state as a whole. The success of these businesses piqued the researchers' interest

in a better understanding of the organization of these enterprises. This descriptive study of Louisiana's swamp tours was the initial step to "understand the importance of nature-based tourism to the state's economy" (O'Mara et al. 1998). Swamp tours were chosen as the business to study because they were primarily small, nature-based tourism businesses whose growth in the last few years had exceeded expectations and little information was known about their structure and performance, ownership patterns, needs, challenges, and opportunities.

O'Mara et al. (1998) conducted the majority of their surveys during face-to-face interviews, but there were some telephone and mail surveys. There were 43 swamp tours in operation at the time of the study, and 37 agreed to participate. Of the 43 businesses named in that report, 22 were still operating in August 2005, prior to Hurricane Katrina. When swamp tour operators were asked an open-ended question regarding what they saw as the "one most negative" factor that would interfere with business success, "possibility of a hurricane" was one of the 16 different responses given. In their conclusions, O'Mara et al. (1998) suggested five measures to protect the sustainability of swamp tours in Louisiana: 1. Producing more educational materials and/or training programs for swamp tour operators, 2. Organizing a swamp tour association, 3. Addressing litter problems within the state, 4. Planning and managing for attraction development, and 5. Developing outdoor educational experiences for school groups. Swamp tour owners affected by Hurricanes Katrina and Rita may want to reconsider these ideas when rebuilding their businesses for the future.

Tierney (1997) studied the immediate and long-term effects of the Northridge Earthquake on randomly chosen businesses in the cities of Los Angeles and Santa Monica, California, which were two areas that were particularly hard hit by the earthquake. The Northridge earthquake of 1994 impacted the greater Los Angeles region; at this time, it was the costliest disaster in U.S. history. Data for the descriptive study were collected through a mail survey. This study encompassed a wide range of types of businesses. The most important conclusion derived from the Northridge earthquake survey was the importance of including in the idea of disaster-related business

vulnerability both physical damage at the business site and a variety of off-site impacts, such as loss of telephone service and disruption of customers, supplies, and goods (Tierney 1997).

1.4 Objectives

1. To determine the type of damages sustained by individual swamp tour companies and whether they are going to continue in the industry.
2. To determine the rebuilding period and process for affected businesses.
3. To determine the affects the hurricanes had on those swamp tour businesses not damaged by the storms.

2.0 METHODS

2.1 Population

The first step of the implementation of this study was to identify all swamp tour businesses in the state of Louisiana. A complete list of swamp tour businesses and their contact information was generated using the following sources:

- Internet Searches including Google.com, Yellowpages.com, Anywho.com, and NewOrleansWebsites.com
- Telephone Directories
- Louisiana Welcome Centers: Jackson Square New Orleans, I-55 Kentwood, I-10 Slidell, and I-10 Atchafalaya Louisiana Official Tour Guide 2005

The population for this study consisted of owners and operators of 51 swamp tour businesses in southern Louisiana. The locations of the swamp tour businesses were divided into three geographic regions (Table 1). These regions are composed of southern Louisiana parishes that were declared emergency areas by the Federal government during Hurricane Katrina, Hurricane Rita, or both of the storms (LDEQ 1& 2 2005). There were 18 swamp tour businesses located in parishes declared emergency areas from Hurricane Katrina only, three swamp tour businesses in parishes declared emergency areas from Hurricane Rita only, and 30 swamp tours located in parishes declared emergency areas from both storms.

2.2 Procedure

Attempts were made to contact each business by telephone October 9-12, 2005, two weeks after Hurricane Rita. Those swamp tours able to be reached by telephone were asked whether their business was operating. This contact allowed the researcher to determine whether a mail survey would be a practical method under the circumstances following the storms.

The survey of southern Louisiana swamp tour businesses was conducted throughout the winter and spring 2006. Swamp tour businesses were initially contacted by telephone on February 16, 2006. At this time, the survey was explained to them and they were asked whether they would agree to participate in the study. The benefits of this study in respect to their business were emphasized. These benefits included determining how many businesses were damaged by the storms, how many businesses are providing service, how the tour operators as a group felt about the future of their business, how the damage to the areas the tours visit effected their business, and whether the hurricanes caused the operators to change the educational information they present to their customers.

Survey questionnaires were administered to swamp tour businesses by first-class mail. Methods followed those described by Dillman (2000). To encourage participants to take part in the survey, the questionnaire was developed to be attractive to respondents. The questionnaire was developed to make responding simple to reduce burden on the part of the respondents and minimize order effects. The questionnaire included fixed alternative questions, some with an open-ended "other" response option. Open-ended format was also used for some of the demographic questions. To maximize the effectiveness of the survey instrument, different types of fixed alternative questions were used, including nominal, binomial, ordinal, and interval (estimated costs, continuous data converted to interval scale for data analysis).

The first mailing of the survey included a cover letter, questionnaire, and a pre-addressed, stamped, return envelope. The cover letter included a brief description

of the purpose of the survey and contact information in the event the respondent had questions or wanted to request more information on the study. The cover letter also explained to the respondent that participation in the survey was voluntary and their answers would remain confidential. Swamp tour businesses were coded numerically using a random numbers table and the code was stamped on the questionnaire. The first mailing of the questionnaire took place February 22, 2006 and was followed 10 days later by a postcard reminding respondents to fill out and return their questionnaire if they had not already done so. As questionnaires were returned, respondent names and addresses were removed from the mailing list. A second mailing of questionnaires was sent to non-respondents March 16, 2006, 10 days after the postcard reminder. The second postcard reminder followed the second questionnaire mailing 14 days later. A third mailing of questionnaires was conducted April 12, 2006.

2.3 Data Analysis

Data analysis was conducted using SPSS for Windows (SPSS v. 10.0, SPSS, Inc.). Descriptive statistics including means and frequencies were used to determine trends and compare variables. Key variables were analyzed using contingency tables and Pearson's Chi Square Test. To use the contingency function in SPSS, data for certain variables were collapsed to create binomial responses. The variable "hours" representing the question, "How do your current hours of operation compare to your hours of operation before Hurricanes Katrina and Rita?" originally had 5 answer choices; these responses were combined into two categories and re-entered into the database under the variable "open". The variable "years" representing the question, "How long has your swamp tour business been in operation?" was originally analyzed on an interval scale and then condensed into two categories and re-entered into the database under the variable "combyear." After data entry was complete, an additional question arose; the possible differences between those swamp tour businesses that closed following Hurricanes Katrina and Rita and those swamp tour businesses that remain open were investigated.

3.0 RESULTS

3.1 Damage Caused by Hurricanes Katrina and Rita

A total of 31 usable responses were received for a response rate of 74 percent. A total of 9 surveys were returned but were not used for data analysis, including six undeliverables, two returned blank, and one returned blank but the respondent wrote on the front that the business was closed. The 11 swamp tour businesses that did not respond to the survey were contacted by telephone on April 20, 2006. Of these 11 businesses, 36 percent were willing to answer a few questions about the effect of Hurricanes Katrina and Rita on their swamp tour. Non-respondents' answers did not differ from those provided by respondents'.

Of the 31 respondent swamp tour businesses, 71 percent were open and 29 percent were closed for business (Table 1). Of the swamp tour businesses reporting they were not open (N=10), 22 percent did not plan to re-open while 44 percent expected to be ready to serve customers within 0-3 months of responding to the survey. The majority (80%) of responding swamp tour owners stated that their business had sustained damage from Hurricane Katrina. One-half of respondents stated that their business was damaged during Hurricane Rita. One-half of swamp tour owners also reported their business was damaged by both of the storms; therefore there were not any swamp tours damaged by Hurricane Rita that were not previously affected by Hurricane Katrina. (Table 1). Only six (21%) of the responding swamp tours were not damaged by either of the hurricanes. More than one-half (58%) of the respondent swamp tour businesses are located in parishes that were declared emergency areas by the Federal government after both Hurricanes Katrina and Rita. Only one (3%) of these businesses is located in a parish that was declared an emergency area during only Hurricane Rita. (Table 1).

The three most common types of damages experienced by swamp tour businesses after Hurricanes Katrina and Rita were loss of telephone service (61%), damage to the swamp area where tours are taken (52%), and loss of electricity (48%). Flooding to the office building and other structures was the least reported (23%) type

Table 1.—Questions concerning storm damage to swamp tour businesses

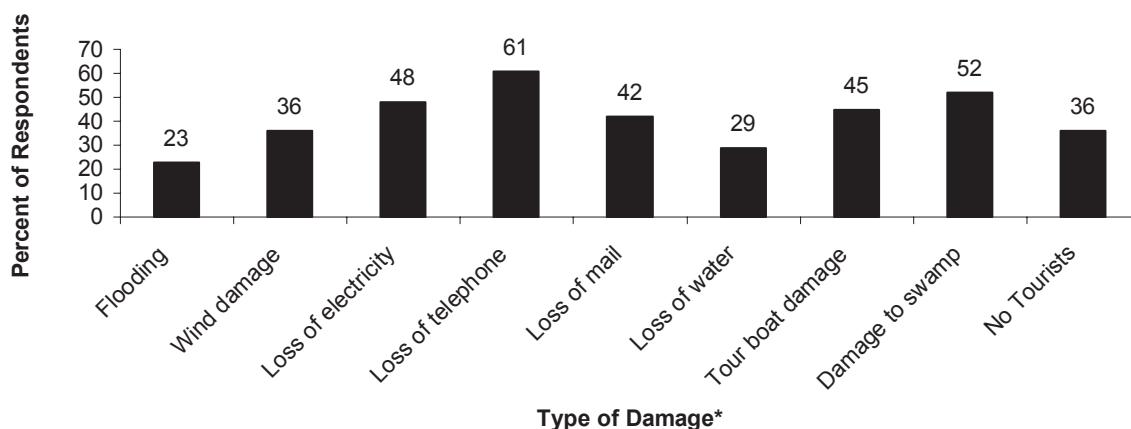
Question	Percent	Total Number of Respondents to Question (N)
Business open after Hurricanes Katrina and Rita	71	31
Business closed after Hurricanes Katrina and Rita	29	31
Swamp tour damaged by Hurricane Katrina only	80	29
Swamp tour damaged by Hurricane Rita only	50	28
Swamp tour damaged by both storms	50	28
Swamp tour not damaged by either storm	21	28
Swamp tour located in parish declared emergency area Hurricane Katrina only	39	31
Swamp tour located in parish declared emergency are Hurricane Rita only	3	31
Swamp tour located in parish declared emergency area during both storms	58	31

Table 2.—Owner estimated cost of repairs to swamp tour businesses (N=18)

Cost	Percent
Less than \$999	17
\$1,000 - \$9,999	33
\$10,000 - \$19,999	6
\$20,000 - \$29,000	0
\$30,000 - \$39,000	6
More than \$40,000	38
Total	100

Table 3.—Financial assistance used by swamp tour owners to pay for repairs (respondents chose multiple answers) (N= 31)

Source of financial assistance	Percent
Federal Emergency Management Agency (FEMA)	10
United States Small Business Administration Disaster Loan	7
Local bank loan	7
Insurance	3
My own money/savings	13
None	13
Did not know help was available	3

**Figure 1.—Type of damage sustained by swamp tour businesses from Hurricanes Katrina and Rita.**

* Respondents chose multiple answers for this question.

of damage to swamp tour businesses (Figure 1). A large portion of respondents (68%) have either finished repairs or are currently repairing damage to their swamp tour business caused by Hurricanes Katrina and Rita. Estimated cost of repairs ranged from less than \$999 (17%) to more than \$40,000 (39%) (Table 2). Less than one-fourth (17%) of swamp tour owners utilized

government aid to help pay for repairs, whereas 20 percent either took out a local bank loan or used their own money (Table 3).

3.2 Passenger Information

Swamp tour owners were asked a series of questions concerning their past and present passengers in order to

Table 4.—Questions concerning swamp tour passenger activity

Questions	Percent	Total Number of Respondents to Question (N)
Spring is the peak season for swamp tour	70	27
Highest level of customer activity occurs in the spring	76	29
Lowest level of customer activity occurs in the winter	86	29
Estimate it will take 1-2 years for swamp tour business to resume at pre-hurricane level	39	28
Agree that business will increase with progression of repairs to New Orleans	79	28

gain a better understanding of how Hurricanes Katrina and Rita affected their customer base. It was found that no significant difference exists ($\chi^2=5.021$, $df=4$, $p>0.05$) between the number of passengers a swamp tour business had in the 12 months before Hurricane Katrina and its operating status after the storms. For the five-year period before Hurricanes Katrina and Rita (2000-2005), 76 percent of swamp tour owners reported their highest level of customer activity took place in the spring and 86 percent reported they experienced their lowest level of customer activity in the winter (Table 4). The majority of swamp tour owners (70%) consider spring to be the peak season for their business. The majority (39%) of swamp tour owners feel it will take one to two years for business to resume at a pre-hurricane level. Most tour owners (79%) agree that their business will increase as progress is made in rebuilding the city of New Orleans (Table 4).

3.3 Swamp Tour Businesses

More than half (55%) of swamp tour businesses take their passengers to visit state land. More (36%) swamp tours are given on pontoon boats than any other type of boat. Approximately one-fourth (26%) of swamp tours are taken on airboats (Table 5). The mean number of years Louisiana swamp tour businesses have been operating is 15 ($N=31$). The newest business has been open for two years while the oldest has been running for 30 years. The length of time swamp tours have been operating was compared to businesses' hours of operation after Hurricanes Katrina and Rita. More of the older swamp tour businesses (operating more than 15 years) are currently open than those tours operating less than 15 years ($\chi^2=4.094$, $df=1$, $p<0.05$) (Table 6). Most swamp tour businesses (62%) had not experienced damage as a result of a hurricane prior to Katrina and

Rita. More than half (59%) of responding swamp tour businesses are family owned and operated. No differences in operating status were found when comparing family owned and non-family owned swamp tour businesses after Hurricanes Katrina and Rita ($\chi^2=2.229$, $df=1$, $p>0.05$). The majority (76%) of swamp tour businesses, including family owned and not family owned, employ a total of between one and five people. When asked how their current employee base compared to their number of employees before Hurricanes Katrina and Rita, 55% of swamp tour owners reported they now have fewer employees. Nearly all swamp tour business owners feel swamp tours are either extremely or moderately important to the state of Louisiana's tourism industry (97%), as well as to the local economy of the area where their business is located (90%) (Table 5).

4.0 DISCUSSION

The majority of swamp tour businesses in southern Louisiana sustained damage as a result of Hurricanes Katrina and Rita, but the severity and type of damage to each business varied. While most swamp tour businesses were operating at least part-time, some were forced to close. Of the businesses that closed, the majority planned to re-open within the next year. Hurricane Katrina was more destructive to swamp tour businesses than Hurricane Rita. Hurricane-induced problems included flooding and wind damage to office buildings and other structures, damage to tour boats, and damage to the swamp, all of which ranged from slight to severe damage. The decreased number of tourists in southern Louisiana reduced the clientele and therefore the profits for swamp tour businesses. Loss of telephone service and interrupted mail delivery, as well as the loss of electricity and water, made it difficult to conduct everyday business.

Table 5.—Questions concerning swamp tour business characteristics

Question	Percent	Total Number of Respondents to Question (N)
Swamp tours that are given on state land	55	31
Swamp tours that use pontoon boats	36	31
Swamp tours that use airboats	26	31
Swamp tours not damaged by prior hurricanes	62	29
Family owned swamp tours	59	27
Non-family owned swamp tours	31	27
Swamp tours that employ 1-5 people	76	25
Swamp tours that have fewer employees because of the hurricanes	55	22

Table 6.—Operating status of swamp tours by length of operation in years

		Operating Status of Swamp Tours		
		Open	Not Open	Total
Years of Operation	Less than 15 years	50%	50%	100%
	More than 15 years	86%	14%	100%

($\chi^2=4.094$, $df=1$, $p<0.05$)

These findings agree with those of Tierney (1997) who, when studying the business impacts of the Northridge earthquake, stated that “it is important to broaden our conception of disaster related business vulnerability to encompass both physical damage at the business site and a range of off-site impacts, such as damage to lifelines and disruption of the flow of goods and supplies, that become problematic for business owners in the aftermath of disasters.”

Although most swamp tour owners estimated the cost of repairs made to their businesses at more than \$10,000, very few owners reported receiving any type of government aid. Most swamp tour owners paid for repairs with their own money or savings. One owner stated they did not know any type of financial aid was available, and it is very possible that other businesses did not apply for aid for the same reason. Some possible explanations for this may be that assistance programs for small businesses were not well advertised in the days and weeks following Hurricanes Katrina and Rita and swamp tour business owners may have been waiting for insurance claims to be processed, which may have caused them to miss deadlines for applying for government aid or disregard government assistance altogether.

The operating status of swamp tour businesses after Hurricanes Katrina and Rita was not influenced by the number of passengers swamp tour businesses served in the 12 months prior to the storms. The data do suggest, however, a trend of more smaller swamp tour businesses, those with less than 1,500 passengers, to be closed than businesses serving more than 1,500 people. This trend may have been statistically significant if the sample size were bigger, or it may have been voided or proved if the intervals given in the question for numbers of passengers had been smaller (e.g., using intervals of 500 for each category instead of continually increasing intervals).

A larger percent of businesses operating for more than 15 years remained open after Hurricanes Katrina and Rita than those businesses that have been operating for less than 15 years. Some possible explanations for this may be that older swamp tour businesses are more financially secure than newer businesses, older businesses may be more established in their local area and have a more reliable clientele than newer businesses (e.g., older businesses may have customers that come back every summer), and older businesses may have more social connections to their local area while owners of newer businesses may be more inclined to close and move elsewhere.

An interesting finding of this study is the emergence of a new type of tour, the New Orleans Disaster Tour. During a visit to the Jackson Square Visitor's Center, New Orleans, in February 2006, one pamphlet was found for a disaster tour offered by a company that conducts a variety of tours, including swamp tours (Gray Line New Orleans 2006). A different swamp tour business listed a disaster tour as one of the additional services it offers to its customers. An Internet search was conducted to determine whether more disaster tours of New Orleans existed and two others were found, both operated by swamp tour businesses (Airboat Adventures, LLC 2006 & Tours By Isabelle: Inter-Tour Louisianne, Inc. 2006). That four swamp tour businesses were offering disaster tours suggested that swamp tour owners have sought out new ways to profit while swamp tour business is slow and that they are capable of re-adjusting their businesses to cater to the changing needs and wants of tourists. The disaster tours offer people the chance to tour some of the New Orleans areas most devastated by Hurricane Katrina, including the 17th Street Canal Breach and the Lower 9th Ward. The tours are also a source of controversy for residents of these areas, who do not want their misfortune to be exploited, but tour representatives said they are conducted in a tasteful manner and raise awareness of the importance of New Orleans industry and coastal wetlands protection (Mowbray 2005).

Swamp tour businesses were a growing portion of the nature-based tourism industry in the state of Louisiana before the 2005 hurricane season brought Hurricanes Katrina and Rita. From 1997, when O'Mara et al. (1998) conducted their descriptive study of Louisiana swamp tours, to August 28, 2005, the day before Hurricane Katrina made landfall, the number of swamp tour businesses in the state had grown from 43 to 51. After Hurricanes Katrina and Rita, 27 swamp tour businesses remained open. Although this is a setback for the swamp tour industry, most owners agreed that their businesses make important contributions to both their local economy and the state of Louisiana's tourism industry. The operating swamp tour businesses seemed willing to wait out this low point in the tourism trade for as long as financially possible; most expected their business to increase as the city of New Orleans is revitalized. A follow-up survey after one or more years is suggested

to determine whether the number of fully operational swamp tour businesses in the state has increased and what progress those who are still operating part-time have made, as well as to detect any changes in the number of tourists in the area.

5.0. CITATIONS

Airboat Adventures, LLC. 2006. Retrieved April 4, 2006, from <http://www.airboatadventures.com/index.html>

Dillman, D.A. 2000. **Mail and Internet Surveys: The Tailored Design Methods**. New York: John Wiley and Sons, Inc.

Gray Line New Orleans. 2006. (Publishing information not available for pamphlet) **Hurricane Katrina "America's Worst Catastrophe."** Retrieved April 4, 2006 from, <http://www.graylineneworleans.com/katrina.shtml>

(LDEQ 1) Louisiana Department of Environmental Quality 1. 2005 Aug 30. Retrieved October 20, 2005, from <http://www.deq.state.la.us/news/pdf/Declarationofemergency.pdf>

(LDEQ 2) Louisiana Department of Environmental Quality 2. 2005 Sept 24. Retrieved October 20, 2005, from, <http://www.deq.state.la.us/news/pdf/HurricaneRitaDeclarationofEmergencyandAdministrativeOrder.pdf>

(LADCRT) Louisiana Department of Culture Recreation, and Tourism. 2004. **Department of Culture, Recreation and Tourism, Annual Report 2004**. Retrieved April 8, 2005, from <http://www.crt.state.la.us/DocumentArchive/annualreport/2004annualreport.pdf>

(LADCRT) Louisiana Department of Culture, Recreation, and Tourism. 2005 **Louisiana Rebirth Plan: Restoring the Soul of America**. Retrieved October 27, 2005 from <http://www.crt.state.la.us/LouisianaRebirth/Plan/LouisianaRebirthplan.pdf>.

Mowbray, R. 2005, December 9. **Gray Line Tour presents Hurricane Katrina Impact**. New Orleans

Times-Picayune. Retrieved April 4, 2006, from New Orleans Convention and Visitors Bureau, <http://www.neworleanscvb.com/articles/index.cfm/action/view/articleID/299/typeID/10>

(NOAA) National Oceanic and Atmospheric Administration 1. 2005 Sept 1. **Climate of 2005. Summary of Hurricane Katrina.** Retrieved October 19, 2005 from <http://lwf.ncdc.noaa.gov/oa/climate/research/2005/katrina.html#impacts>

(NOAA) National Oceanic and Atmospheric Administration 2. 2005 Oct 9. **Hurricane Rita.** Retrieved October 19, 2005 from http://www.srh.noaa.gov/lch/rita/rita_main.html

O'Mara, D.T.; Liffman, M.M.; Henning, B.R. 1998. **Louisiana Swamp Tours: A Survey.** Baton Rouge,

LA: Louisiana State University, Louisiana Sea Grant College Program.

Tierney, K.J. 1997. **Business Impacts of the Northridge Earthquake.** Journal of Contingencies and Crisis Management. 5: 87-97.

Tours By Isabelle: Inter-Tour Louisianne, Inc. 2006 Retrieved April 4, 2006, from http://toursbyisabelle.com/tours_neworleans.html

(USDO I) U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, U.S. Census Bureau. 2001 National Survey of Fishing Hunting and Wildlife Associated Recreation.