

Offshore Oil and *Deepwater Horizon*: Social Effects on Gulf Coast Communities

Volume I: Methodology, Timeline, Context, and Communities



Offshore Oil and *Deepwater Horizon*: Social Effects on Gulf Coast Communities Volume I

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PREFACE

“Through many decades, the United States has shown a persistent and remarkable ability to tolerate the costs of petroleum use, presumably because people feel the benefits are greater in the aggregate, or perhaps because of a disconnect between the benefits and costs” (Hultman 2010).

The *Deepwater Horizon* disaster officially began on April 20, 2010 with the blowout of the Macondo well in the U.S. Gulf of Mexico, though the circumstances that culminated in the explosion of the rig were based in earlier decisions and events. Likewise, when the disaster officially ended on August 3, 2010, with BP successfully sealing the well in concrete, many of its effects were only beginning to appear. The disaster caused the deaths of 11 people, physically injured 17 more, and released an estimated 4.9 million barrels of crude oil into the Gulf of Mexico more than 40 miles off the Louisiana coast. It occurred in a region accustomed to disasters, so some of its effects were mitigated by the expertise and mechanisms in place throughout the region to manage them. The spill’s impacts were heightened, however, by the fact that the region was still recovering from recent, severe hurricanes and flooding. In short, this disaster, laid upon those prior experiences, created a new set of actors, resources, and responses.

The research on which this report is based began almost immediately after the rig exploded and continued over a 2-year period. At the time of the explosion, researchers from the Bureau of Applied Research in Anthropology (BARA) at the University of Arizona were finalizing a study of fabrication and shipbuilding along the Gulf of Mexico, and were gathering data for a study of the history of the deepwater era, which began offshore in the Gulf of Mexico in the 1970s. The researchers in the field turned their attention to the disaster and began documenting its effects. Those in the BARA office began responding to calls from people within the affected region, and began working with the staff of what was at that time the U.S. Minerals Management Service (MMS) to plan this study. Given the uncertain and rapidly evolving situation, the study was designed to allow for flexibility and so that research questions and analyses would address the concerns of the diverse groups living in the region; be appropriate for those being studied; and provide information and new understanding to local, state, and federal entities. BARA researchers contacted colleagues at coastal universities and developed a research partnership with anthropologists at Louisiana State University (LSU) and with local institutions, community-based organizations, and independent community researchers in Mississippi and Louisiana. Key local partners included the Katrina Research Center at the University of Southern Mississippi, the United Houma Nation, Bayou Grace Community Services of Chauvin, Louisiana, and the Dulac Community Center of Dulac, Louisiana.

While some of the effects of this disaster were immediately obvious and readily documented, others emerged more slowly as the nature and scope of the event and its aftermath continued to unfold. The research approach was designed to capture this evolution and was focused in three areas: (1) coastal counties of Mississippi and Alabama; (2) Lafourche, Terrebonne, and east St. Mary parishes in Louisiana; and (3) Jefferson, Orleans, Plaquemines, and St. Bernard parishes in Louisiana. It focuses on the short-term effects, those that occurred in the first 20 months after the disaster began, and provides the context within which those effects were experienced.

The report is organized in two volumes. The first begins with a Summary of the major findings of the research. The summary includes references to sections throughout the report that

contain information to support the findings. Next is a discussion of the approach and methodology of the study and the selection of the study communities. This is followed by a summary and then detailed timeline of key events in the unfolding disaster which triggered local effects. Specific dates and events are referred to throughout the report, but readers are encouraged to read the timeline to better understand the complicated and rapidly changing conditions under which people in the coastal communities were living and working during the study period. The next chapters establish the context within which this disaster occurred, and describe the communities that were the focus of the study, highlighting in each some of the locally-specific and synergistic effects of the disaster.

The second volume describes five key economic sectors in the region—offshore oil and gas, fishing, tourism, shipbuilding and fabrication, and retail—and summarizes how the disaster has impacted the people, businesses, and communities involved in each of those sectors. For each sector, readers will find a general introduction, a brief summary of the methodology used to gather the information upon which the analysis is based, and a brief history of the sector. These are followed by an outline of events that shaped that sector in the region, leading up to the explosion of *Deepwater Horizon* in April 2010, a summary of the immediate impacts, and a discussion of the issues that faced businesses and workers in the sector throughout 2011. The second volume also includes chapters that take a closer look at the impacts of the disaster on non-governmental organizations (NGOs), the claims process, and the differential effects of the disaster according to ethnicity. The volume ends with a discussion of the ongoing uncertainty associated with this disaster more than two years after it began, and key research questions to be addressed in the coming years.

This work could not have been done without the help and support of hundreds of individuals who live and work along the U.S. Gulf of Mexico, and it is to them that the authors offer our sincerest thanks. Though research reports cannot bring back loved ones or restore coastal wetlands, it is our hope that the findings of this study can help us all better understand what happened and what it has meant to the people and communities most directly affected by it.

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SUMMARY

The U.S. Gulf of Mexico has been central to the history and development of the global offshore petroleum industry since 1947 when the first successful well was completed out of sight of land off the coast of Morgan City, Louisiana (see Chapter 1, Volume II). In the Gulf, petroleum is stored under high pressure within a layered sedimentary basin. Successful extraction and development requires that the pressure be controlled, and, when that fails, blowouts sometimes occur. Still, the April 20, 2012 Macondo blowout was unprecedented in the history of the Gulf offshore industry, both for its size and for the amount of oil it released into the Gulf (see Chapter 2, this volume). Also, although thousands of wells have been drilled in the Gulf, in 2010 the *Deepwater Horizon* was one of only 33 rigs drilling in water deeper than 500 feet. Consequently, despite the vast knowledge and experience with the offshore petroleum industry in the region, there was much uncertainty about the blowout and what to do about it.

The Gulf of Mexico is also home to several major estuaries and supports both commercial and recreational fishing (see Chapter 2, Volume II). In addition, its beaches, coastal communities, and cities such as New Orleans attract millions of tourists each year (see Chapter 3, Volume II). Its diverse population is as varied as its topography, made up of people whose ancestors have lived in the regions for hundreds of years as well as immigrants who were drawn to the region as recently as 2005, when storms provided opportunities for cleanup and construction (see Chapter 4, this volume). This is also a region where disasters occur with some frequency, where human activities combine with events such as hurricanes and result in loss of life and property (see Chapter 3, this volume). The effects of the BP disaster can only be understood in this context. Indeed, the failure to distinguish this event from other disasters exacerbated, and in some cases created, some of its effects. This study, conducted between April 2010 and December 2012, examines the social and economic effects of the disaster on the people and communities along the coasts of Louisiana, Mississippi, and Alabama. It focuses on the short-term effects that occurred in the first 20 months after the disaster began and provides the context within which those effects were experienced.

SOCIAL EFFECTS OF THE MACONDO WELL BLOWOUT

The Macondo well blowout created tremendous social effects. Eleven men lost their lives and 17 others suffered physical injuries in the explosion that destroyed the *Deepwater Horizon* drilling rig. Over 30,000 people work in the Gulf of Mexico offshore petroleum industry. The deaths, injuries, and trauma faced by survivors on the rig affected them and their families and friends, and served as a stark reminder of the risk and danger associated with work offshore. During the time efforts were underway to cap the well and stop the oil flowing into the Gulf, the area around the well was closed, immediately affecting drilling, production, and all associated activity. Within five days, all deepwater drilling in the Gulf was suspended (see Chapter 2, this volume). The Department of the Interior lifted the suspension in October 2010 and approved the first deepwater drilling permit in February 2011. The suspension had a direct effect on drilling companies, their contractors, rig fabricators, and many others that provide the people, supplies, and equipment necessary for drilling to occur. The explosion also affected the petroleum industry

more broadly, raising questions about its overall role and performance and accelerating safety reforms that were already underway (see Chapter 1, Volume II).

The petroleum industry is highly cyclical, responding to oil prices that fluctuate according to the futures market as well as supply and demand. This cyclical pattern is one of the factors that have contributed to labor shortages within the industry (see Chapter 3, this volume). At the time of the blowout, the petroleum industry had been experiencing a slowdown driven in large part by the 2008 economic recession (see Chapter 1, Volume II). In the Gulf of Mexico, drilling generally peaks during the late spring and summer months. Many in the industry were expecting 2010 to provide evidence that the industry was starting to recover. Therefore, when drilling was halted, many companies attempted to wait out the delays and hold on to workers – reassigning them, cutting back on their hours, and otherwise attempting to avoid layoffs. Some companies transferred their operations and employees overseas and to onshore fields, taking advantage of the shale gas boom occurring at the time. Still, many workers in the most precarious positions within the industry, those working as contract employees with temporary or hourly positions, lost their jobs and were unable to find other work. Those employees remained largely invisible throughout the study (see Chapter 1, Volume II).

The Macondo blowout released an estimated 4.9 million barrels of crude oil into the Gulf of Mexico and resulted in the closure of Gulf fishing areas from central Louisiana to west Florida. Both commercial and recreational fishermen were affected. Many fishermen were expecting a bounty year, the first since the hurricanes of 2005, so the effects were devastating (see Chapter 2, Volume II). The disaster and closures disrupted both the May and August shrimp seasons. The presence of oil in the Gulf and coastal wetlands also affected finfish, oysters, and crabs. As the fishermen were affected, so, too, were the fuel docks, processors, charter boat companies, and bait shops (see Chapter 2, Volume II).

The disaster also had an immediate effect on tourism in the region. Some beaches were closed, and fishing rodeos and festivals were cancelled. Media coverage of the spill exacerbated concerns of potential tourists (see Chapter 3, Volume II). By mid-May, BP had announced it would provide tourism grants to all four impacted Gulf states, and efforts to attract tourists back to the region continued throughout the study. The pace of recovery depended on the location of the business and what sector it occupied, such as gaming, charter boat fishing, or lodging.

As in any region, as the industries that form the backbone of the economy faltered, so, too, did many others. The shipbuilding and fabrication industry is dependent on the offshore petroleum and fishing industries, as well as military contracts, so the effects on that industry varied. For example, by 2011 the recovery in oilfield construction and repair was focused primarily on the larger vessels and primarily of benefit to the larger yards (see Chapter 4, Volume II). Retailers experienced extensive social and economic effects, though these varied widely depending on the type of business they operated and its location and customer base (see Chapter 5, Volume II).

SOCIAL EFFECTS OF THE RESPONSE

The social effects of the Macondo well blowout were exacerbated by the response. People of the Gulf region are accustomed to disasters and have response strategies in place at the household, community, state, and regional levels. But this disaster was different. As directed by the federal government's National Oil and Hazardous Substances Pollution Contingency Plan (National Contingency Plan), the Coast Guard was responsible for directing all response efforts to contain and clean up the oil (see Chapter 2, this volume). The Secretary of Homeland Security declared this to be the first Spill of National Significance and appointed a National Incident Commander to coordinate resources and communication at the national level.

The Coast Guard named BP the Responsible Party for the spill, making the corporation legally liable for specified damages resulting from the discharged oil and the costs of removing the oil (see Chapter 2, this volume). BP had an extensive network of contractors and subcontractors to provide the people, vessels, equipment, and supplies to support its offshore operations, but its network for spill response and cleanup was much smaller. Almost immediately, BP began flying personnel and contractors from around the world into the region. The company rented hotel rooms, condominiums, beach houses, and docks, providing immediate benefits to those who owned the properties. Yet the size and scope of the disaster quickly exhausted BP's networks and many other companies became involved, some with extensive experience and others which were newcomers. Given the recession in the rest of the United States, many job seekers headed to the region, causing some locals to draw parallels to the boom years of the 1970s when oil and gas activity was at its peak (see Chapter 3, this volume). To help mitigate the effect of the disaster on fishermen, BP created the Vessels of Opportunity (VOO) program to employ local boat owners and operators to deliver boom and to seek and clean up oil (see Chapters 2 and 7, Volume II). Many fishermen did benefit from their participation in the program, but so, too, did others who saw and capitalized on an opportunity to make a lot of money.

Efforts to mitigate the effects of the oil began while oil was still gushing from the well. No one was certain of the amount of oil, where it was, or where it was heading. The disaster began just before the 2010 hurricane season, and as the oil continued to flow so too did concerns about where it would end up. The decision to use four common strategies – onsite burning, skimmers, booms, and dispersants – was made early (see Chapter 2, this volume). Smoke from the fires could be seen for miles and contributed to concerns about acute health effects of responders and coastal residents. The booms were ineffective in tidal surge, but BP, the Coast Guard, and local governments continued to argue for more boom, and tens of thousands of people went into action ordering, warehousing, transporting, and installing boom across the region from Texas to Florida. Despite concerns of ecologists about the effect of the wakes made by thousands of vessels as they moved in and out of the Gulf through fragile wetlands, the activity continued for months. Though many argued that without the dispersants the ecological effects of the disaster would have been much worse, their use remained controversial throughout the study period. The dispersants broke up the oil and helped sink it, exacerbating fear and mistrust about the oil and the dispersants (see Chapters 1 and 2, Volume II).

As the oil was gushing into the Gulf, Louisiana state officials began releasing freshwater through Mississippi River diversion channels, arguing that the action would keep oil from moving into the estuaries. Freshwater diversions have been a significant – and controversial – aspect of coastal restoration plans for decades. The freshwater lowered the salinity within the

oyster breeding grounds resulting in the death of as many as 80% of the oysters (see Chapter 2, Volume II). Also, despite the efforts to keep the oil in the Gulf, oil began appearing on wildlife and beaches and in the wetlands. Cleanup efforts began almost immediately and continued throughout the study period (see Chapter 2, this volume).

The disaster required response at all levels of government. Extensive planning and coordination were needed to acquire and make available the necessary people, supplies, and equipment, including boom, vessels, fuel, and docks. The Gulf region has tremendous capacity to respond to disasters, but as noted earlier, the oil disaster was coordinated through BP rather than the state and local networks already in place. Thus, the existing disaster response network was only somewhat effective (see Chapter 6, Volume II).

Especially as the region moved farther into hurricane season, many people expressed concern that oil could come ashore (see Chapter 6, Volume II). But, given the uncertainties surrounding whether, when, and where it would arrive, residents and officials were left scrambling to prepare. From National Park Service representatives responsible for protecting cultural resources across the entire Gulf coast to local homeland security and emergency preparedness officials who had to rewrite emergency response plans to take into account the possibility of oil-contaminated flooding, few were idle during the summer months. Fortunately for everyone, no major hurricanes came ashore along the Gulf coast during 2010 or 2011.

The disaster quickly became a major political event. The storms of 2005, especially Hurricane Katrina, attracted lots of national and international interest, and the region was under intense scrutiny for several years afterward. Media spokespeople relied on contacts from that period and began to establish new ones. And, as the disaster continued, it drew more attention. Within the coastal communities, that attention generated major effects (see Chapter 6, Volume II). From television and computer screens to the front page of newspapers, people around the world saw images of oiled beaches and marshes and dead and dying marine animals. At the time, the use of social media was growing rapidly. Individuals with cell phones, digital cameras, and internet blogs gathered information and were able to spread it almost instantaneously, though they often provided little or no context. Because the availability and use of these technologies was still uneven, individuals thousands of miles away at times received information as or even before locals did. Uncertainty about the effects of the release persisted throughout the study period (see Chapter 9, Volume II).

As the disaster continued, the social, psychological, and economic effects on coastal residents grew. Yet, many people, from philanthropists to individual donors, pointed to BP's culpability and withheld support. Residents who lost income or experienced other negative effects of the disaster turned to the churches and non-profits which typically provide disaster assistance. Those organizations scrambled for resources and faced huge hurdles trying to respond (see Chapter 6, Volume II).

Tens of thousands of people across the United States also attempted to respond, but the disaster did not generate the sorts of volunteer opportunities that follow hurricanes (see Chapter 6, Volume II). Many individuals and organizations had helped rebuild the region after the hurricanes of 2005 and 2008 and others reacted to the images of oiled wildlife that appeared on television screens and newspaper front pages. Yet, there were few opportunities for people to travel to the region for hands-on participation. Some offered their ideas for how to cap the well in internet campaigns while others sent their hair or donated clothing to local non-profits.

Over time, the effects on coastal communities diverged, depending on factors such as the location of the community, whether or not oil came ashore nearby, the social and political

dynamics in the community, prior experience with oil spills and contamination from industry activity, the mix of industries and sectors within those industries that dominated local economies, the role of community members in the cleanup, the community's connections to regional, state, and national resources, and the ethnic makeup of the residents (see Chapters 5 through 9, this volume). The ability of individuals and communities to secure resources depended on their political and legal status. Some Native American and Asian communities were able to tap into networks of support, for example, while many undocumented immigrants were afraid to seek assistance (see Chapter 4, this volume, and Chapter 8, Volume II). Important community factors include the state in which the community was located and whether or not it was unincorporated. The situation was complicated, however, because many residents earn their livelihoods on oil rigs and platforms or large fishing vessels, often far from the place they live, a situation exacerbated by coastal erosion and storms. Add that the disaster began during the worst recession the region had experienced in decades and followed years of unusual economic activity tied to post-hurricane rebuilding, and it is clear why neither residents nor the researchers could readily separate the effects of the disaster from the effects of other events.

Beyond its legal responsibility for the spill, BP recognized that it would be held accountable for the enormous economic and social effects of the spill. In addition to directing money to specific purposes, such as the tourism fund mentioned above, BP established a claims process to address financial losses (see Chapter 7, Volume II). In August, BP established the Gulf Coast Claims Facility (GCCF) to settle claims arising from the disaster. Both processes were hindered by a lack of adequate knowledge of local and regional economies or household livelihood strategies, and by early promises to settle claims quickly. Many coastal residents' frustrations were exacerbated by what they perceived to be actions by both BP and the first GCCF administrator which appeared to assume that local economies would recover within a year. Throughout the study, residents and community leaders debated questions of who should be compensated and how much (see Chapters 5 through 9, this volume and Chapter 7, Volume II).

At the end of 2012, much remained unknown about health effects, the claims process, the condition of major Gulf fisheries, the fate of deepwater petroleum exploration and production and the offshore workforce, and more (see Chapter 9, Volume II). Nevertheless, those in positions of responsibility, at the household, organization, and community level, had to continue to make decisions and to act on issues about which they lacked full understanding.

CHAPTER ONE: THE STUDY

Bethany Rogers, Brian Marks, and Diane Austin

The *Deepwater Horizon* disaster has drawn attention from people and organizations across the globe. The explosion of the rig, the release of oil into the Gulf of Mexico, and the efforts to contain, disperse, and clean up that oil are only a few of the events that have contributed to this ongoing disaster. Several studies have analyzed the explosion, its causes, and its immediate consequences (National Commission 2011; Deepwater Horizon Study Group 2011; NAE-NRC 2010). Millions of dollars are being spent trying to assess the environmental effects of the oil and dispersants used in the cleanup efforts (NOAA 2010; Kujawinski et al. 2011; Laleian et al. 2011). Much less is going toward assessing the effects of this disaster on the people who live and work in the coastal communities affected by it (although see Alliance for Justice 2011; APRC 2011a; GNO, Inc. 2010, 2011a; The Knowland Group 2010; Oxford Economics 2010; Tunnell 2011). This report summarizes the results of an early effort to measure, document, and describe the social effects of this event on coastal communities in Louisiana, Mississippi, and Alabama. The study focuses on the period from April 2010 through early 2012. It was funded by the U.S. Bureau of Ocean Energy Management (BOEM)¹ and conducted by researchers from the University of Arizona (UA) and Louisiana State University (LSU), in partnership with local organizations and community researchers in three study areas in these coastal states.

This study contributes to the small body of research that assesses the economic impacts of oil spills drawn variously from gross measures of economic performance, statistical economic modeling, public opinion surveys, insurance adjustment practice, and liability law (Restrepo & Associates 1982; Grigalunas et al. 1986; Cohen 1993; García Negro et al. 2009; GNO, Inc. 2010, 2011a, 2011b; Goldberg 2010; APRC 2011a, 2011b). The research demonstrates the contribution of ethnographic research to understanding local economic activity and social relationships among places and over time, augmenting information derived from macro-economic statistics, econometric modeling, and journalism. It complements the work of social scientists who have studied past oil spills (Omohundro 1982; Assaf et al. 1986; Dyer 1993; Bonnieux and Rainelli 1993; Jorgensen 1995; Fall et al. 2001; Picou et al. 1999; Picou et al. 2009).

Though this disaster constituted far more than an oil “spill,” the terms oil spill and disaster are used interchangeably in this report.

1.1. APPROACH AND METHODS

Researchers in the Bureau of Applied Research in Anthropology (BARA) at the University of Arizona have investigated the socioeconomic effects of the offshore petroleum industry in the Gulf of Mexico since the mid-1990s (see, for example, Wallace et al. 2001;

¹ The study began under the U.S. Minerals Management Service (MMS). The MMS was reorganized twice following the *Deepwater Horizon* explosion. Responsibility for the study was transferred first to the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE). On October 11, BOEMRE was replaced by the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE).

Austin and McGuire 2002; Austin et al. 2008; McGuire, Austin, and Woodson 2013). The U.S. Outer Continental Shelf (OCS) produces about 15% of the nation's domestic natural gas and 27% of its domestic oil. The BOEM (Bureau of Ocean Energy Management) is the federal bureau responsible for managing development of that resource. BOEM's Environmental Studies Program conducts and sponsors research and synthesizes available environmental, social, and economic information to support decision-making related to the development of offshore energy and mineral resources (see also Section 2.4.1). Using ethnographic research methods, combining participant observation with formal and informal discussions with knowledgeable individuals, BARA researchers have worked with other social scientists and historians, as well as community researchers, to understand this complex industry which involves hundreds of communities, thousands of businesses, and hundreds of thousands of people.

1.1.1. Responding to the Disaster: Ethnography in Three Study Areas

When the *Deepwater Horizon* drilling rig exploded on April 20, 2010, BARA researchers were finalizing a study of fabrication and shipbuilding along the Gulf of Mexico and were gathering data for a study of the history of the deepwater era, which began offshore in the Gulf of Mexico in the 1970s. Both in the field in and in the Tucson office, BARA researchers began gathering information about what was happening and started working with social scientists at the U.S. Minerals Management Service (MMS) to plan this study. Given the complex and evolving situation, the study was designed to allow for flexibility so that its research questions, methods, and analyses would address the concerns of the diverse groups living in the region, be appropriate for those being studied, and provide information to local, state, and federal entities. BARA researchers identified academic and community research partners at LSU; the Katrina Research Center at the University of Southern Mississippi; the United Houma Nation; Bayou Grace Community Services of Chauvin, Louisiana; and the Dulac Community Center of Dulac, Louisiana. The researchers focused on coastal Louisiana, Mississippi, and Alabama in order to capture the many direct and indirect impacts of the spill as well as the region's diversity in terms of economic sectors, industries, occupations, and ethnic groups.

Taking this approach, the researchers prioritized small cities and communities, businesses, and organizations that could be accessed readily using ethnographic methods. Thus, except on rare occasions when a researcher was following a specific lead, the study does not address the impacts of the disaster on large urban areas or on large corporations whose main offices and decision makers are located outside the region. The principal exception to this was where team members extended their efforts beyond the study areas to explore ethnic group dynamics. In particular, one research team member visited and interacted with Vietnamese populations from southeast Texas to Mobile County, Alabama in order to explore and explain the presence of these populations and the ways that their members were specifically affected by the disaster and its aftermath (see Section 1.1.2). The research design was approved by Institutional Review Boards at the UA and LSU and project descriptions, consent forms, and disclosure documents were prepared in English, Spanish, and Vietnamese. The UA Principal Investigator led workshops for both university and community researchers in community-based research approaches and in research methods.

The study began in September 2010 and continued through early 2012. Given the size of the study area, team members had to address the practical demands of conducting research in

communities that are widely dispersed throughout a region that, in many places, is better suited to travel by boat than by car. For example, significantly impacted communities around New Orleans lie in Jefferson, Orleans, Plaquemines, and St. Bernard parishes and include: Grand Isle, an island community of Jefferson Parish, a 2½ hour drive to the southwest of New Orleans; Venice, an oil and gas port at the southern tip of Plaquemines Parish; and the fishing villages of Hopedale and Yscloskey at the far eastern end of Saint Bernard Parish. South Terrebonne Parish is organized around five bayous, and going from one to another requires traveling up and down bayou roads connected only occasionally by bridges. In addition, conversations with appropriate government and business officials and organizational leaders required trips to neighboring cities and towns such as Belle Chasse, Chalmette, and Houma; to county and parish government seats; and to the large urban areas such as New Orleans and Mobile.

Within each study area, the composition and approach of the research team varied as the team members adapted to the patterns and rhythms of communities, and to the researchers' own strengths and connections. In each location, the researchers developed a network of relevant contacts for this study from their existing research, personal relationships and initial scoping fieldwork. In Lafourche Parish, for example, some of the people participating in this study have shared their insights, experiences and stories in BARA studies on the offshore petroleum industry dating back to the mid-1990s. One United Houma Nation community researcher first interacted with BARA researchers in 1996 as a participant in a baseline study of the industry's historical impacts on her tribe (Wallace et al. 2001). Similarly, one LSU ethnographer has spent years documenting the ethnic landscape of Plaquemines Parish (Ware 1996), and her embedded relationships with the Croatian and Creole communities proved crucial for gaining entrée into the oyster fishing community that is principally composed of members of these two ethnic groups. A community researcher from Ironton had family members and lifelong friends who worked in various occupations in the parish, including oil and gas, churches, and parish government. Team members used these ties to establish the relevant research contacts and trust that are the essential components for carrying out successful ethnographic research.

At the same time, in all study communities, the researchers established new connections and relationships for this study. The community researchers worked in various occupations and, in their dual roles as social service providers, librarians, and directors of NGOs as well as researchers, helped extend and strengthen these ties. For example, they provided connections to important players in the post-spill NGO landscape, as well as insight into the political and funding dynamics at play within the non-profit sector. They also provided an intimate view of the needs and concerns of individuals and families working to recover or successfully enduring the effects of the disaster. The resulting community-focused collaborative ethnography, wherein long-term resident and short-term ethnographers have informed and complemented the work of one another, incorporates multilevel, multisite, and multitemporal perspectives that bring understanding to situations of mobility, diversity, and volatility (Colson and Kottak 1996; Austin and McGuire 2002). Indeed, it makes possible the capture of what Sally Falk Moore (1987) has called "change-in-the-making."

1.1.2. Coastwide Assessment of Vietnamese Communities

One UA researcher undertook a coastwide assessment of Vietnamese-American Gulf Coast communities in the spring and summer of 2011 for two reasons. First, in contrast to its experience with several ethnic groups in the region, the research team did not have much ethnographic data on the Vietnamese communities from previous studies. Since many first-generation Vietnamese-Americans have limited English proficiency, this study included a field researcher conversant in Vietnamese. Second, and more pressing, journalistic observations (see Alexander-Bloch 2010; Pickett 2010; Sasser 2010) indicated that many Vietnamese Gulf Coast residents were seriously affected by the oil spill due to their involvement in commercial fisheries and seafood processing, and that they lacked ready alternative livelihoods to fall back upon. For these reasons, the study organizers decided to assess the social and economic condition of Vietnamese communities from east Texas through southern Alabama and, also through this process, the organizers sought to gain insight into the socioeconomic situation of Gulf Coast communities outside the study areas where most ethnographic research was focused.

The researchers used several methods to identify Vietnamese communities for field visits. They reviewed census data on the racial demographics and reported ancestry of residents in the coastal parishes and counties of Alabama, Mississippi, Louisiana, and Texas and considered as potential fieldwork sites those tracts where a large percentage of respondents reported Asian racial identity and Vietnamese ancestry. The observations of other fieldworkers and the researchers' own experience also informed fieldwork site selection, as did contemporary and historical accounts of Vietnamese community locations (Arden 1981; Starr 1981; Durrenberger 1996; Montero 1979; Airriess and Clawson 1991; Moberg and Thomas 1993; Boudreaux 2011: 75-6; Nash 1992; Bounds 2011; Tomingas-Hatch 2009; Truitt 2009). Based on this tentative list, the field researcher drew up a schedule for coastal communities from Mobile County, Alabama, to Port Arthur, Texas, and undertook between one and four weeks of fieldwork in each of the following places: southern Alabama, southern Mississippi, New Orleans East, Lower Plaquemines Parish, Barataria and the westbank in Jefferson Parish, Terrebonne Parish, St. Mary Parish, Iberia and Vermillion parishes, and Port Arthur to Sabine Pass, Texas.

Some Vietnamese communities, like the Versailles neighborhood of New Orleans East, are well known. In these large ethnic enclaves, finding businesses and residents was facilitated by their clustering in shopping centers, apartment buildings, cafés, churches, temples, and local non-profit agencies, often with Vietnamese-language signage out front and paired American and Republic of Vietnam flags flying above. Smaller communities proved harder to locate and required careful observation and follow-up from prior conversations. Dulac, Louisiana, for instance, has very few Vietnamese residents recorded in Census data but they own and operate a portion of the town's fishing fleet, especially the large, steel-hulled Gulf shrimp trawlers and tuna long-liners that dock along the Bayou Grand Caillou. Dulac is important to the livelihood of many Vietnamese people, but not as a residence; fishermen commute there from the nearby city of Houma, or even as far as New Orleans. Other communities, like tiny hamlets in east Texas and St. Mary Parish, were too small to show up as distinct places in the U.S. Census, but in many of these the researcher found Vietnamese commercial fishermen, Vietnamese-owned and -operated seafood docks, and even Vietnamese-language masses at local Catholic churches.

The fieldwork format followed closely that used elsewhere in the study; it involved short “drop-in” conversations with a sample of retail businesses serving the Vietnamese community, businesses operated by Vietnamese-Americans, community institutions, commercial fishermen and seafood processing workers where present, and workers in other major economic sectors, such as shipbuilding and casinos, relevant in those specific places; attendance at community events like festivals, public meetings, and religious services; and, when possible and convenient for respondents, longer conversations with key informants. Most fieldwork was conducted in Vietnamese and notes were taken in English. No conversations were audio recorded. The conversations were unstructured, often including considerable introductions on the part of the researcher and lengthy inquiries from respondents asking about the researcher’s background, experience studying the language, and even ethnic background and marital status.

1.1.3. Summary

Overall, this research has included three ethnographers and seven community researchers who were “in the field” continuously between April 2010 and December 2011, one faculty member who alternated between the study areas and Tucson in three to four week rotations during this period, four faculty members and six university students who each spent at least a month in the field gathering information about a specific community or economic sector, and five university students who provided logistic and office support. In the field, researchers participated in, and observed, local and regional meetings and festivals. They took photos of highway billboards and community activities, visited workplaces and homes, lived with local residents, and monitored local media output. They identified people who are experts in their communities, businesses, and organizations and talked with them, often on multiple occasions, to learn and record their perspectives. These interactions ranged from short drop-in encounters to in-depth, audio-recorded oral history accounts. The researchers also worked closely with community leaders to identify data to help define, explain, and assess the impacts of the *Deepwater Horizon* and of the offshore oil and gas industry in general. The researchers developed this process to accurately describe how this disaster was experienced and understood by the people it affected most directly. In the office, students transcribed audio files and notes, created and managed databases, and gathered secondary data.

The focus of this study is on social effects, interpreted broadly to include impacts on household and community economies, social gatherings such as crab boils and fishing rodeos, social networks such as those among community-based organizations and large non-profit organizations, and interactions between the public and agencies involved in the spill response and recovery, including the cleanup and damage claims. Researchers did not, however, gather systematic data about household and business revenues and expenses or address the legal liability of any party for the economic harms reported to the team. While the study does not evaluate seafood safety, the health effects of exposure to oil and dispersants, or the spill’s ecological consequences on wildlife and fisheries, it does examine how these concerns affect people and the institutions of which they are a part.

The ethnographic data collected in the field serve two purposes. First, respondents described their economic conditions and social circumstances in the wake of the oil spill, often comparing their current situation with how things were before and during the spill, and comparing their personal and family experiences with those of others in their community.

Second, respondents shared their stories of migration, resettlement, and community development in the Gulf Coast. Vietnamese participants, for example, shared information about where they lived in Vietnam and how they fled the country, where they lived initially in the United States and how they came to live and work along the Gulf Coast. Native Americans talked of how members of their communities have been forced to move because of the widening of highways and coastal erosion. These data on the experiences of people from a variety of backgrounds shed light on the socioeconomic impacts of the BP oil spill on Gulf Coast communities; they also contribute to the larger project of understanding how ethnic groups and enclaves in the region are influenced by offshore oil and gas development.

1.2. OVERVIEW OF THE STUDY COMMUNITIES

Researchers sought a depth of understanding, particularly of the cumulative impacts of the disaster across economic sectors. The primary study area includes Terrebonne, Lafourche, and Plaquemines parishes, Louisiana; Harrison County, Mississippi; and Mobile County, Alabama with a study team committed to each. In the summer of 2010 each team identified a specific community for in-depth study in order to illustrate the synergies among various apparently disparate events and effects, and how those synergies lessened or exacerbated the impacts of the disaster (see Figure 1.1). From east to west, the focal communities are Bayou la Batre, Alabama; east Biloxi, Mississippi; and the oil and gas and fishing communities of lower Plaquemines Parish, Larose, and Dulac, Louisiana (see Chapters 5 through 9, this volume). These communities include people in a wide range of situations, for example, families and households with some members who fish, others who work in oil, and others in retail, and this mix allowed the researchers to examine how the people who lived and worked in this region before, during, and after the disaster had managed through the first two years. Tables 1.1 through 1.4 provide general demographic data on each of the communities, and the parishes/counties where they are located. As shown, some of the study communities had fewer people in 2010 than in 2000, due primarily to the loss of population following the storms of 2005-2008. These data are discussed more extensively in the community descriptions (Chapters 5 through 9, this volume).

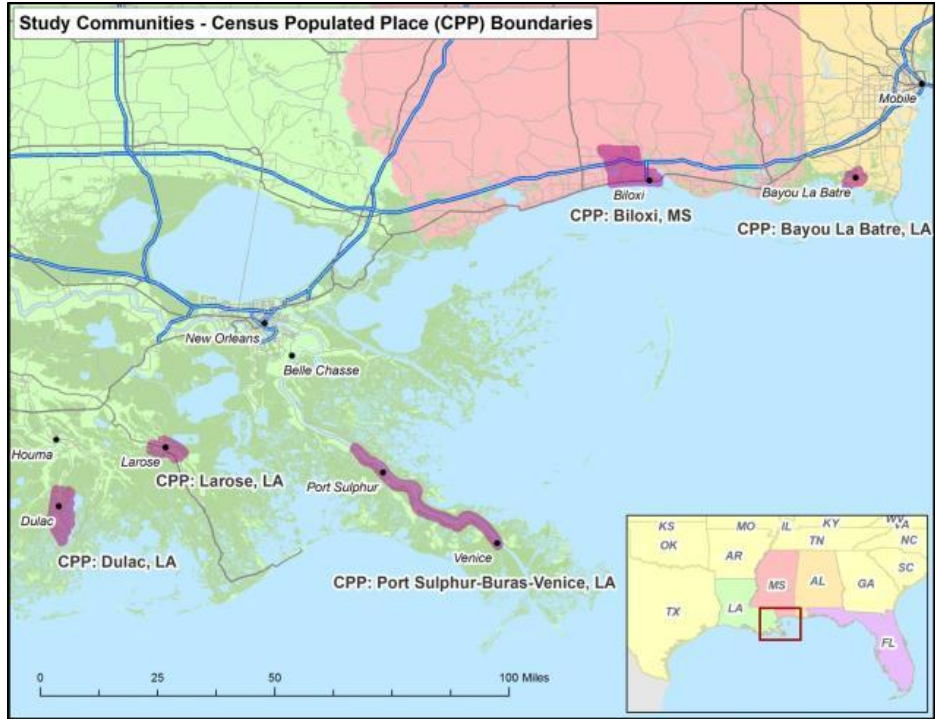


Figure 1.1. Map of study communities
 Source: Ben McMahan

Table 1.1. Population Change within the Study Areas, 2000 to 2010

Total Population	Mobile County	Harrison County		Terrebonne Parish	Lafourche Parish		Plaquemines Parish		
2010*	412,992	187,105		111,860	96,318		23,042		
2000**	399,843	189,601		104,503	89,974		26,757		
Total Population	Bayou la Batre	Biloxi	Biloxi-39530 Zip Code	Dulac	Larose	Cutoff	Empire	Pointe a la Hache	Port Sulphur
2010*	2,558	44,054	8,086	1,463	7,400	5,976	993	187	1,760
2000**	2,313	50,644	17,214	2,458	7,306	5,635	2,211	N/A	3,115

Source: U.S. Census Bureau 2000, 2010: Profile of General Population and Housing Characteristics

Table 1.2. Educational Attainment within the Study Areas, 2010

2010-Educational Attainment-Population over 25 years	Bayou la Batre (Mobile County)	Biloxi (Harrison County)	Biloxi - 39530 5-Digit ZCTA (Harrison County)	Dulac- (Terrebonne Parish)	Larose (Lafourche Parish)	Cut Off (Lafourche Parish)	Empire (Plaquemines Parish)	Pointe a la Hache (Plaquemines Parish)	Port Sulphur (Plaquemines Parish)
High School or higher	63.7%	85.3%	N/A	55.0%	68.2%	75.4%	79.7%	N/A	68.2%
Bachelor's degree or higher	12.5%	22.9%	N/A	9.7%	11.9%	8.8%	18.4%	N/A	3.5%
Graduate or professional degree	6.7%	8.4%	N/A	3.3%	3.6%	1.9%	0.0%	N/A	1.6%

Source: U.S. Census Bureau 2006-2010: American Community Survey 5-year estimates: Educational Attainment

Table 1.3. Educational Attainment in the Study Areas, 2000

2000- Educational Attainment- Pop over 25 years	Bayou la Batre (Mobile County)	Biloxi (Harrison County)	Biloxi-39530 5-Digit ZCTA (Harrison County)	Dulac- (Terrebonne Parish)	Larose (Lafourche Parish)	Cut Off (Lafourche Parish)	Empire (Plaquemines Parish)	Pointe a la Hache (Plaquemines Parish)	Port Sulphur (Plaquemines Parish)
High School or Higher	54.9%	81.9%	72.8%	39.0%	60.7%	69.2%	60.3%	N/A	61.2%
Bachelor's degree or higher	7.4%	19.2%	14.6%	3.9%	8.6%	9.3%	11.8%	N/A	5.3%
Graduate or professional degree	3.6%	7.2%	5.0%	1.6%	2.5%	1.9%	3.3%	N/A	1.3%

Source: U.S. Census Bureau 2000: Educational Attainment by Gender

Table 1.4. Employment Status of Population in Study Areas, 2010

2010- Employment Status of Population 16 and Over	Bayou la Batre (Mobile County)	Biloxi (Harrison County)	Biloxi - 39530 5-Digit ZCTA (Harrison County)	Dulac- (Terrebonne Parish)	Larose (Lafourche Parish)	Cut Off (Lafourche Parish)	Empire (Plaquemines Parish)	Pointe a la Hache (Plaquemines Parish)	Port Sulphur (Plaquemines Parish)
In Labor Force	61.7% (1,170)	68.4% (24,497)	N/A	54.3% (491)	60.5% (3,048)	61.4% (2,437)	83.2% (480)	N/A	61.3% (629)
Civilian Unemployed	7.8% (148)	3.6% (1,288)	N/A	6.3% (57)	2.2% (109)	3.7% (146)	11.8% (68)	N/A	5.1% (52)

Source: U.S. Census Bureau 2006-2010: American Community Survey 5-year estimates: Selected Economic Characteristics

Table 1.5. Employment Status of Population in Study Areas, 2000

2000- Employment Status of Pop 16 and Over**	Bayou la Batre (Mobile County)	Biloxi (Harrison County)	Biloxi-39530 5-Digit ZCTA (Harrison County)	Dulac- (Terre- bonne Parish)	Larose (Lafourche Parish)	Cut Off (Lafourche Parish)	Empire (Plaque- mines Parish)	Pointe a la Hache (Plaquemines Parish)	Port Sulphur (Plaque-mines Parish)
In Labor Force	53.7% (918)	66.8% (26,461)	65.5% (9,259)	44.9% (824)	55.4% (3,136)	57.2% (2,445)	54.6% (865)	N/A	51.3% (1,209)
Civilian Unemployed	6.0% (102)	3.6% (1,427)	3.8% (534)	3.0% (55)	2.3% (130)	2.2% (93)	6.2% (99)	N/A	2.9% (68)

Source: U.S. Census Bureau 2000: Summary

Table 1.6. Racial Composition of Study Communities in 2010

2010*	White alone	Black or African American alone	Asian alone	American Indian and Native Alaskan alone	Native Hawaiian and Other Pacific Islander alone	Some Other Race	Two or More Races	Hispanic or Latino (of any race)
Bayou la Batre	1,543 (60.3%)	314 (12.3%)	583 (22.8%)	9 (0.4%)	2 (0.1%)	-	-	72 (2.8%)
Biloxi	30,129 (68.4%)	8,632 (19.6%)	1,951 (4.4%)			1,662 (3.8%)	1,351 (3.1%)	3,847 (8.7%)
Biloxi - 39530 Zip Code	3,930 (48.6%)	2,638 (32.6%)	759 (9.4%)			518 (6.4%)	150 (1.9%)	929 (11.5%)
Dulac	709 (48.5%)	28 (1.9%)	11 (0.8%)	617 (42.2%)			86 (5.9%)	62 (4.2%)
Larose	6,129 (82.8%)	373 (5.0%)	157 (2.1%)	279 (3.8%)		318 (4.3%)		568 (7.7%)
Cutoff	5,785 (84.3%)	95 (1.6%)		277 (4.6%)		292 (4.9%)	191 (3.2%)	436 (7.3%)
Empire	661 (66.6%)	212 (21.3%)	75 (7.6%)			24 (2.4%)	13 (1.3%)	25 (2.5%)
Pointe a la Hache	16 (8.6%)	170 (90.9%)		1 (0.5%)				0 (0.0%)
Port Sulphur	441 (25.1%)	1,136 (64.5%)		97 (5.5%)		31 (1.8%)	29 (1.6%)	36 (2.0%)

Source: U.S. Census Bureau 2010: Profile of General Population and Housing Characteristics

Table 1.7. Racial Composition of Study Communities in 2000

2000**	White alone	Black or African American alone	Asian alone	American Indian and Native Alaskan alone	Native Hawaiian and Other Pacific Islander alone	Some Other Race	Two or More Races	Hispanic or Latino (of any race)
Bayou la Batre	1,213 (52.4%)	237 (10.2%)	770 (33.3%)	6 (0.3%)	10 (0.4%)	-	-	44 (1.9%)
Biloxi	36,177 (71.4%)	9,643 (19.0%)	2,590 (5.1%)			725 (1.4%)	1,203 (2.4%)	1,848 (3.6%)
Biloxi - 39530 Zip Code	10,030 (58.3%)	4,787 (27.8%)	1,591 (9.2%)			291 (1.7%)	393 (2.3%)	657 (3.8%)
Dulac	1,327 (54.0%)	61 (2.5%)	12 (0.5%)	969 (39.4%)			77 (3.1%)	42 (1.7%)
Larose	6,252 (85.6%)	413 (5.7%)	174 (2.4%)	282 (3.9%)			124 (1.7%)	184 (2.5%)
Cutoff	5,151 (91.4%)	63 (1.1%)	71 (1.3%)	213 (3.8%)			73 (1.3%)	120 (2.1%)
Empire	1,344 (60.8%)	747 (33.8%)	61 (2.8%)			20 (0.9%)	30 (1.4%)	26 (1.2%)
Pointe a la Hache (N/A)								
Port Sulphur	1,412 (45.3%)	1,384 (44.4%)		219 (7.0%)		28 (0.9%)	52 (1.7%)	30 (1.0%)

Source: U.S. Census Bureau 2000: Profile of General Population and Housing Characteristics

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CHAPTER TWO: THE SPILL, RESPONSE, AND CLEANUP

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2.1. OVERVIEW OF THE RESPONSE AND CLEANUP

The response to the *Deepwater Horizon* disaster involved some 25,000 people at its peak in June 2010, from operations to stop the leak a mile below the sea to efforts to contain and clean up the oil rising to the surface and arriving onshore. The cleanup involved numerous local, state and federal agencies interacting with BP, the Responsible Party, a constellation of more than 150 private contractors and sub-contractors, and thousands of people, many from the coastal communities most threatened by the spill and others from around the country (K. Nelson 2010; Curran 2010; Yang 2010; Johnson 2010).

On April 21, 2010, the day after the rig exploded, even as rescue crews continued vainly searching the Gulf for the 11 men who had been killed, BP and the rig's owner and operator, Transocean, were sending down ROVs (remotely operated vehicles) attempting to close the well's blowout preventer (BOP) on the sea floor (National Commission 2011: 131). While these unsuccessful attempts to stop the leak continued, exponentially rising estimates of the oil flowing from the broken well led to an escalation in the resources brought to bear on the growing plume. Chemical dispersants were first sprayed on surface oil slick on April 22nd and, a day later, the first Unified Area Command was established by the Coast Guard in Robert, Louisiana (National Commission 2011: 132, 143).

By April 29th, with national media attention growing alongside coastal residents' anxieties about possible harm to fisheries, beaches, wetlands, and indeed their entire way of life (Kaufman and Robertson 2010), the BP spill was designated a Spill of National Significance and an overall federal National Incident Commander was assigned (National Commission 2011: 136). Eventually, four Area Commands were established with their own On-Scene Coordinators, all working under the command of National Incident Commander USCG Admiral Thad Allen. In the final days of April, Louisiana's Governor declared a State of Emergency as oil began making landfall in Plaquemines Parish, and the Louisiana Department of Wildlife and Fisheries (LDWF) began closing portions of state waters to fisheries, just weeks before the opening of the state's May inshore shrimp season (National Commission 2011: 138-140; Smith 2010; Robertson 2010). By the end of April, the Unified Command had deployed the first of what would become 3,000 boats and vessels in the Vessels of Opportunity (VOO) program, wherein commercial fishermen, pleasure boat owners, and contractors searched for oil, ferried personnel and supplies, placed protective booms, and skimmed and burned floating oil (DeSantis 2010a; Warren 2010).

Early in May, four new methods to contain or stop the leak were being deployed at what had become a large flotilla of response vessels at the former site of the *Deepwater Horizon*. The unsuccessful efforts to staunch the flow of oil included firing "junk shots" of various materials into the BOP and lowering a containment dome over the BOP. BP began drilling a first relief well, a last-resort solution to drill down, intercept, and seal off the problem well, on May 2nd; a second, backup relief well was begun on May 17. On May 16, a Riser Insertion Tube Tool began siphoning off a portion of the oil leaking from the broken riser, somewhat reducing the flow into the Gulf, but only for nine days (National Commission 2011: 132-146). At the end of the month,

a “top-kill” procedure, pumping drilling mud into the broken riser to check the flow of oil and gas coming up, also failed to stop the spill (Nuckols 2010; National Commission 2011: 150-157).

Also in May, as the surface slick continued to grow and move with winds and tides, NOAA Fisheries began closing portions of federal waters to fisheries. The agency declared a Federal Fishery Resource Disaster, and announced an expanded closed zone of 22% of Federal Gulf waters, on the 25th of the month (National Commission 2011: 140; Restore the Gulf 2010a). Some state waters in Mississippi, Alabama, and Florida were also closed to fishing in June and July, and closure boundaries shifted day to day in federal and state waters; federal closures reached a peak of 37% of the Gulf on June 2nd (National Commission 2011: 159; Mississippi Department of Environmental Quality 2010a; Florida Fish and Wildlife Conservation Commission 2010a). State and federal fisheries closures shrank after the beginning of August 2010, but some federal waters remained closed until April 2011 (Restore the Gulf 2011a), and small areas in Louisiana remained closed past April 2011 (LDWF 2011a; LDWF 2011b).

Oil spill and response efforts also included freshwater diversions. In May 2010, Louisiana’s governor ordered freshwater diversions of the Mississippi River to be opened to push oil slicks away from the state’s marshes. Fresh river water poured into normally brackish water oyster grounds, killing most of the oysters near diversion outfalls (Buskey 2010).

Between April 20 and July 15, 4.9 million barrels of oil from the *Deepwater Horizon* spilled into the Gulf (National Commission 2011: 346). The estimated 1.8 million gallons of chemical dispersants sprayed into that oil from the air and at the deep sea leak site between April 22 and July 19 (Restore the Gulf 2010b) remain a contentious subject (Juhasz 2011: 96-110). On May 10th, the U.S. EPA announced a testing protocol for subsea dispersants use and on May 26 instructed BP to reduce dispersant use by 75% (National Commission 2011: 145, 160). The EPA directed BP to stop using dispersants altogether on July 14th (National Commission 2011: 161), although a Congressional investigation has raised doubts about how closely these directives were followed by Unified Command, as many exceptions were granted allowing more dispersant spraying than authorized by the May 26 EPA directive (Markey 2010, Wald 2010).

Health and safety issues facing the thousands of response workers were highlighted early in legal actions by commercial fishermen and environmental justice advocates. The Occupational Safety and Health Administration (OSHA) issued a directive on the use of respirators and protective gear on May 16th following those actions (Juhasz 2011: 121-32; Subra 2011: 15; DeSantis 2010b). Concerns about air quality offshore for VOO workers and onshore in coastal communities were underscored when limited air monitoring during Summer 2010 showed air from the *Deepwater Horizon* site in the Gulf blowing onshore contained particulate matter at levels equal to America’s most polluted cities. The air quality was worse offshore (Juhasz 2011: 132-4; Buskey 2011d). In 2011, the Louisiana Department of Health and Hospitals (LDHH) reported 415 health complaints related to the oil spill, 329 of which came from cleanup workers on shore or at sea (Goldstein et al. 2011: 1338). In one well-publicized incident, seven VOO workers from Lafourche Parish, Louisiana were hospitalized after cleaning oil in Breton Sound on May 26. However, the fishermen and BP disagreed about what made the men sick. BP blamed a degreaser used on their boats, while the men argued exposure to oil and dispersants was the cause (DeSantis 2010c).

VOO program hiring practices were also controversial. Coastwide, BP contracted out VOO to Parsons International, an engineering, construction, technical, and management services firm (Johnson 2010), which sub-contracted with numerous Gulf coast boat companies to manage local VOO task forces. Local authorities – parish presidents, town mayors, a Native American

leader – had considerable discretion over VOO hiring. Local boaters objected to the hiring of out-of-state boats and captains; commercial fishermen objected to the hiring of sport fishermen, locals or not, while they were without work and unable to fish due to closures. These issues led, in some jurisdictions, to fishermen protesting apparent favoritism and unfair practices (Pleasant 2010; L. Nelson 2010; Murtaugh 2010; Mobile Press-Register Editorial Board 2010).

On shore, the dozens of spill subcontractors sought thousands of workers to clean marsh plants, vacuum up oil, shovel and bag tar balls from beaches, and handle the logistics of the cleanup effort. Recreational boat marinas were taken over by BP and its contractors, becoming temporary cities of responders and largely off-limits to reporters and the public (King 2010; K. Nelson 2010; Pleasant 2010). People seeking work flocked to the Gulf Coast and local residents tried to get spill cleanup jobs, but the recruiting process was highly unpredictable. As many as 500 workers were recruited in a single afternoon to form Rapid Response beach cleanup teams for priority beach cleanups. This occurred, for example, just prior to President Obama's first visit to Grand Isle, Louisiana (King 2010). Days later, a poorly organized jobs fair in Gulfport, Mississippi, had to be cancelled because too many people arrived looking for cleanup employment (Thomas 2010). Many of the workers brought into Rapid Response beach cleanup teams and Shoreline Cleanup Assessment Teams were African-Americans from economically distressed Gulf Coast towns and cities; their presence in majority-white and wealthier beach communities provoked anxiety among some coastal white residents (Juhasz 2011: 192-200; BR053 2011; Marks Field Notes, 2011).

On June 30th, Hurricane Alex temporarily stopped efforts to cap the well and clean oil in the Gulf; three weeks later, Tropical Storm Bonnie halted response activities again (Fountain 2010; Kaufman 2010). Despite these delays, on July 15th BP succeeded for the first time in capping the well and stopping the flow of oil into the Gulf. The leak was permanently stopped on August 3 following the completion of a concrete seal (National Commission 2011: 165-167). An August 4 Federal government report on the fate of the *Deepwater Horizon* oil claimed 74% of the oil "was gone." The report stated that 26% of the oil remained in the Gulf by that date. This latter amount, estimated at 1.27 million barrels, represented approximately two-thirds of the total amount spilled in the *Exxon Valdez* disaster. Another 25% of the oil had evaporated into the atmosphere or dissolved into the Gulf, 16% had naturally dispersed, 17% was recovered from the wellhead, and the remaining 16% had been burned, skimmed, or chemically dispersed (National Commission 2011: 167-169; Lubchenco et al. 2010).

Once the well was capped, the cleanup operation was rapidly demobilized. After a slow startup in May and June, the VOO program was still only ramping up (Philips 2010) when, on August 7, BP officials in Alabama announced they would begin shrinking the VOO program in that state (Dezember 2010). VOO ended in Mississippi and Alabama on September 15, 2010, after spending \$500 million to employ 3,500 vessels (Kent 2010). Cleanup activities shrank gulfwide in the fall of 2010. By November, only 11,000 cleanup workers were still employed and just 1,000 VOO boats were still working across the Gulf of Mexico (Robertson and Rudolf 2010). In 2011, shoreline cleanup programs in many parts of the Gulf transitioned to monitoring, although Tropical Storm Lee, which turned up tar balls, mats of oil and tar, and leftover booms in places like Fourchon Beach, Louisiana, led to a temporary resurgence of cleanup activities (Schleifstein 2011).

The cleanup will continue to affect Gulf Coast residents through legal and medical monitoring programs underway or expanding in 2012. Lawsuits by former VOO captains for back pay, compensation for boat damages, and payments for “stand-by” days when they were on contract but not deployed would outlive the program, becoming prominent in the local media in early 2011 (Crowe 2011; Ferrara 2011; Murtaugh 2011) and again surfacing as part of the March 2012 settlement between BP and the Plaintiff’s Steering Committee (PSC; Mowbray 2012b). This settlement also promised to address cleanup workers’ health claims through compensation and health monitoring (Burdeau 2012b; New Orleans Times-Picayune 2012a), while several medical studies unrelated to the BP-PSC settlement began to collect data from oil response workers. One such study (Busby 2012), funded by the National Institutes of Health (NIH), was highly visible along Gulf Coast highways from late 2011 through early 2012 with large billboards featuring images of beach cleanup workers and asking former workers to call if they needed “Help with the oil spill?” (Figure 2.1).



Figure 2.1. Billboard along a Louisiana highway in 2011
Source: Brian Marks

2.2. TIMELINE OF KEY EVENTS

The *Deepwater Horizon* disaster was not a single event but, instead, a long series of events that continue to unfold and impact the people and environments of the Gulf Coast. The following timeline highlights key events that directly or indirectly caused social effects within the study area between April 20, 2010 and April 20, 2012. The events are organized into nine categories: Spill Response & Cleanup; Offshore Drilling Moratorium / Suspension / Permitting; Public Health; Claims Process / Legal; Commercial Fisheries; Economic Issues; Environmental Restoration; and Social Services and Non-Governmental Organizations (NGOs).

Date	Event
4/20/10	(Spill Response & Cleanup) Approx. 9:50 p.m. CDT – An unexpected influx of hydrocarbons (commonly referred to as a “kick”) escalated to a blowout on the Deepwater Horizon rig, just after the crew finished drilling the exploratory Macondo well. Gas that flowed onto the rig floor through a mud-gas vent line ignited in two separate explosions, eventually sinking the platform. The explosions kill 11 platform workers and injure 17 others; another 98 people survive without serious physical injury (BOEMRE 2011; National Commission 2011)
4/21/10	(Spill Response & Cleanup) First attempts by BP and Transocean to close the Blow-Out Preventer (BOP) on the sea floor using Remotely Operated Vehicles (ROVs) (National Commission 2011: 131)
4/22/10	(Spill Response & Cleanup) Chemical dispersants sprayed for the first time on oil from Deepwater Horizon (National Commission 2011: 143)
4/23/10	(Spill Response & Cleanup) U.S. Coast Guard (USCG) establishes Unified Area Command in Robert, LA (later moved to New Orleans) (National Commission 2011: 131) (Spill Response & Cleanup) USCG suspends search for 11 missing Deepwater Horizon workers (National Commission 2011: 131)
4/24/10	(Spill Response & Cleanup) ROVs locate two places where oil is leaking from the riser pipe (Restore the Gulf 2010a). (Spill Response & Cleanup) Unified Command reports oil leaking at 1,000 barrels / day (National Commission 2011: 132)
4/26/10	(Offshore Drilling Moratorium / Suspension / Permitting) Interior Secretary Salazar orders immediate inspections of all deepwater drilling rigs in the Gulf of Mexico (BOEMRE 2010a)
4/27/10	(Spill Response & Cleanup) The Departments of Interior and Homeland Security establish the Joint Investigation Team (JIT) to investigate causes of the Deepwater Horizon explosion. JIT is made up of staff from the Minerals Management Service (MMS), soon to be renamed the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) and USCG (BOEMRE 2011)
4/28/10	(Spill Response & Cleanup) Controlled in-situ burning of surface oil slicks scheduled to begin (Restore the Gulf 2010b) (Spill Response & Cleanup) Admiral Landry reports NOAA scientists believe as much as 5,000 barrels / day could be leaking (National Commission 2011: 133)
4/29/10	(Spill Response & Cleanup) Coast Guard designates <i>Deepwater Horizon</i> spill a Spill of National Significance, establishing a National Incident Commander to coordinate nationwide response (National Commission 2011: 136) (Spill Response & Cleanup) Louisiana Governor Jindal declares State of Emergency in Louisiana (National Commission 2011: 138) (Spill Response & Cleanup) Louisiana Governor announces creation of Vessels of Opportunity (VOO) Program which will hire local fishermen to help in oil clean up and landfall prevention (Office of the Governor of Louisiana 2010a)
4/30/10	(Commercial Fisheries) Louisiana Department of Wildlife and Fisheries (LDWF) begins closing state waters and oyster grounds to fisheries (National Commission 2011: 140) (Spill Response & Cleanup) (Commercial Fisheries) Governor Jindal orders the opening of Mississippi River fresh water diversions to try to prevent oil from penetrating into coastal marshes. Fresh water causes 80% mortality in nearby oyster beds by July (Office of the Governor of Louisiana 2010b; Buskey 2010b)
5/1/10	(Spill Response & Cleanup) USCG Admiral Thad Allen designated National Incident Commander (Restore the Gulf 2010c)

Date	Event
5/2/10	<p>(Spill Response & Cleanup) President Obama visits Venice, LA in first trip to Gulf region during the spill (Restore the Gulf 2010d)</p> <p>(Spill Response & Cleanup) BP begins drilling primary relief well (National Commission 2011: 132)</p> <p>(Spill Response & Cleanup) First VOO task forces from Terrebonne and St. Bernard parishes, LA reported working (Houma Courier, 5/2/10; Times-Picayune, 5/2/10)</p> <p>(Commercial Fisheries)NOAA Fisheries begins closing federal waters to fisheries, initially totaling 6,817 square miles, 3% of federal Gulf waters otherwise open to fishing (National Commission 2011: 140, NOAA 2010)</p>
5/5/10	<p>(Spill Response & Cleanup) BP announces the release of \$25 million block grants to each affected state to implement spill response Area Contingency Plans (BP 2010a)</p>
5/6-7/10	<p>(Spill Response & Cleanup) A 125-ton containment dome is lowered over the broken riser and BOP to pipe leaking oil to the surface, but fails (National Commission 2011: 146)</p> <p>(Economic Issues) SBA opens Business Recovery Centers in six southeast Louisiana parishes (SBA 2010a)</p>
5/10/10	<p>(Spill Response & Cleanup) EPA adopts testing protocol for subsea dispersant use, capping volume of dispersant to be used and requiring monitoring (National Commission 2011: 145)</p> <p>(Economic Issues) SBA makes economic injury assistance available in more Louisiana parishes. SBA Economic Injury Disaster Loans become available in 34 Louisiana parishes and seven Mississippi counties (SBA 2010b)</p>
5/12/10	<p>(Offshore Drilling Moratorium / Suspension / Permitting) MMS inspection report of deepwater rigs in Gulf finds no major violations (Restore the Gulf 2010e)</p>
5/16/10	<p>(Spill Response & Cleanup) Riser Insertion Tube Tool begins channeling oil from riser on sea floor; operates for nine days (National Commission 2011: 146)</p> <p>(Spill Response & Cleanup)(Public Health) OSHA issues directive on respirator and protective gear use by oil spill cleanup workers (Subra 2011: 15)</p>
5/17/10	<p>(Spill Response & Cleanup) BP begins drilling backup relief well (National Commission 2011: 132)</p> <p>(Economic Issues) BP announces tourism grants to all four impacted Gulf states, \$25 million to FL, and \$15 million each to LA, MS and AL (BP 2010b)</p>
5/19/10	<p>(Offshore Drilling Moratorium / Suspension / Permitting) Interior Secretary announces MMS will be restructured into three entities, the Bureau of Ocean Energy Management (BOEM), Bureau of Safety and Environmental Enforcement (BSEE), and Office of Natural Resource Revenue, effective October 1, 2011 (Secretary of the Interior 2010)</p>
5/24/10	<p>(Environmental Restoration) BP commits \$500 million for research on ecosystem assessment, impacts, and recovery efforts through the Gulf of Mexico Research Initiative (GoMRI) over 10 years (Gulf of Mexico Research Initiative 2012)</p> <p>(Spill Response & Cleanup) EPA instructs BP to scale back use of dispersants (National Commission 2011: 160)</p>
5/25/10	<p>(Commercial Fisheries) Federal Fishery Resource Disaster declared. NOAA Fisheries expands fishing closed area in Gulf of Mexico to 22% of Federal Gulf waters (Restore the Gulf 2010f)</p>
5/26/10	<p>(Spill Response & Cleanup) BP begins “Top Kill” attempt following Federal On-Scene Coordinator approval (National Commission 2011: 150)(Spill Response & Cleanup) EPA and Coast Guard formalize their May 23 order to reduce dispersant use by 75% from peak usage in a directive to BP (EPA 2010a)</p> <p>(Spill Response & Cleanup) (Public Health) First reported Vessel of Opportunity Worker Exposure Incident (Restore the Gulf 2010g)</p>

Date	Event
5/27/10	(Offshore Drilling Moratorium / Suspension / Permitting) Interior Secretary Salazar directs MMS to issue a six-month moratorium on all drilling at more than 500 ft. water depth in the Gulf of Mexico and Pacific Ocean (National Commission 2011: 152)
5/28/10	(Spill Response & Cleanup) President Obama makes second visit to Gulf region (National Commission 2011: 150) (Spill Response & Cleanup) "Top Kill" fails to stop oil leak after several attempts over three days (National Commission 2011: 150, 157)
5/30/10	(Offshore Drilling Moratorium / Suspension / Permitting) Deepwater moratorium takes effect through MMS Moratorium Notice to Lessees and Operators, NTL No. 2010-N04. Operations on 33 deepwater rigs are consequently halted (National Commission 2011: 152; GNO, Inc. 2011)
6/1/10	(Commercial Fisheries) Closure of portions of Mississippi state waters to commercial and recreational fishing (Mississippi Department of Environmental Quality (MDEQ) 2010)
6/2/10	(Commercial Fisheries) Federal fisheries closure area reaches peak at 37% of federal Gulf waters normally open to fisheries (National Commission 2011: 140; Restore the Gulf 2010h)
6/3/10	(Spill Response & Cleanup) BP begins flowing oil from the riser through its "top hat" collection device, increasing the amount of oil captured through the device over time (National Commission 2011: 159)
6/4/10	(Commercial Fisheries) NOAA reopens 16,000 square miles of the Gulf formerly closed to fishing (Restore the Gulf 2010i)
6/8/10	(Offshore Drilling Moratorium / Suspension / Permitting) MMS issues Notice NTL No. 2010-N05, promulgating new required safety measures for offshore drilling permitting (GNO, Inc. 2011) (Public Health) Louisiana Office of Public Health reports 71 people have suffered health problems believed related to the oil spill [29 cleanup workers, 21 oil rig workers on two rigs reporting exposure to dispersants, and 21 on shore] (Buskey 2010a)
6/13/10	(Commercial Fisheries) The Florida Fish and Wildlife Conservation Commission announces partial closures of state waters to commercial and recreational fishing (FWC 2010a)
6/16/10	(Claims Process / Legal) Following agreement with federal government, BP announces \$20 billion fund to pay individual and business claims, as well as judgments and settlements, natural resource damage costs, and state and local response costs (National Commission 2011: 185)
6/18/10	(Spill Response & Cleanup) 25,000 response and cleanup workers reported participating in response efforts, of which 21,000 are private contractors from a variety of local, national, and international companies (Yang 2010; Johnson 2010)
6/21/10	(Commercial Fisheries) NOAA re-expands closed fishing areas, which now approach 36% of Gulf federal waters (Restore the Gulf 2010j) (Offshore Drilling Moratorium / Suspension / Permitting) MMS is renamed and reorganized as BOEMRE, Michael Bromwich sworn in as BOEMRE head (BOEMRE 2010b)
6/22/10	(Offshore Drilling Moratorium / Suspension / Permitting) Judge Martin Feldman of the U.S. District Court in the Eastern District of Louisiana issues preliminary injunction against Administration's 6-month suspension of deepwater drilling (U.S. District Court for the Eastern District of Louisiana 2010)
6/29/10	(Public Health) Coast Guard and EPA require BP to test oil spill response waste for hazardous materials (National Commission 2011: 170)

Date	Event
6/30/10	(Spill Response & Cleanup) Hurricane Alex temporarily halts spill containment and cleanup work at well site (Fountain 2010)
7/5/10	(Spill Response & Cleanup) Commercial fishermen in Bayou La Batre, AL hold demonstration calling for more commercial fishermen to be hired into the program, protesting transfer of local VOO program management to contractor related to town's mayor (Murtaugh 2010; Mobile Press-Register Editorial Board 2010)
7/8/10	(Offshore Drilling Moratorium / Suspension / Permitting) Fifth Circuit Court of Appeals denies federal government's request to stay injunction against deepwater drilling suspension in Hornbeck v. Salazar (Fifth Circuit U.S. Court of Appeals 2010; National Commission 2011: 152)
7/12/10	(Offshore Drilling Moratorium / Suspension / Permitting) Interior Secretary Salazar issues a revised drilling suspension in reaction to court injunction based not on water depth, but on the type of blowout prevention technology being used (National Commission 2011: 152) (Commercial Fisheries) Commercial and recreational fisheries closures amount to 35% of the Gulf normally open to fishing (NOAA 2010b)
7/14/10	(Spill Response & Cleanup) (Public Health) BP prohibited from using dispersants entirely by EPA (National Commission 2011: 161)
7/15/10	(Spill Response & Cleanup) Leaking well is successfully shut in for the first time, stopping flow of oil into the Gulf; BP begins well integrity test to determine how well leak is capped before permanent sealing is attempted (National Commission 2011: 165)
7/23/10	(Spill Response & Cleanup) Tropical Storm Bonnie temporarily halts spill cleanup work and attempts at permanently killing well (Kaufman 2010)
7/29/10	(Offshore Drilling Moratorium / Suspension / Permitting)(Claims Process / Legal) Baton Rouge Area Foundation (BRAAF) announces it will administer \$100 million deepwater rig worker compensation fund from BP through its Gulf Coast Restoration and Protection Foundation (BRAAF 2010) (Commercial Fisheries) Reopening of some Louisiana state waters to commercial fishing from the Mississippi River Delta to the Mississippi state line (LDWF 2010)
7/31/10	(Spill Response & Cleanup) (Public Health) EPA reports results of the second phase of dispersant testing on two Gulf of Mexico aquatic species, concluding that Corexit 9500A is generally no more or less toxic than seven available alternatives, but some tests inconclusive (EPA 2010b)
8/3/10	(Spill Response & Cleanup) BP succeeds in sealing the well with concrete through the "static kill" procedure before the relief well's completion (National Commission 2011: 167)
8/4/10	(Spill Response & Cleanup) Federal government issues report on Deepwater Horizon oil budget and environmental fates; one federal official reports 75% of spilled oil "is gone" (National Commission 2011: 167)
8/6/10	(Commercial Fisheries) Mississippi Department of Marine Resources (MDMR) and Mississippi Department of Environmental Quality (MDEQ) reopen state waters to finfish and shrimp fisheries (MDEQ 2010b)
8/16/10	(Economic Issues) Commerce Secretary Locke announces Restoration and Recovery Grants for Louisiana and other Gulf states and the deployment of 21 Assessment and Evaluation teams to communities affected by the oil spill (Restore the Gulf 2010k) (Commercial Fisheries) Alabama Department of Conservation and Natural Resources Marine Resources Division (MRD) announce re-opening of all state waters closed to commercial and recreational fishing (Alabama MRD 2010) (Commercial Fisheries) Florida Fish and Wildlife Conservation Commission (FWC) announces re-

Date	Event
	opening of closed state waters to fishing (FWC 2010b)
8/17/10	(Public Health) NIEHS (National Institute of Environmental Health Sciences) presents preliminary plans for Gulf oil spill cleanup worker health study (Subra 2011: 18)
8/20/10	(Claims Process / Legal) Judicial Panel on Multi-District Litigation (MDL) transfers all Deepwater Horizon oil spill legal claims to the Eastern District of Louisiana and consolidates them under Judge Carl Barbier (Alliance for Justice 2011: 36)
8/23/10	(Claims Process / Legal) Gulf Coast Claims Facility (GCCF) officially takes over claims process from BP (GCCF 2010a)
8/31/10	(Spill Response & Cleanup) (Public Health) EPA updates its July 31 report confirming Corexit 9500A is less toxic than Louisiana Sweet Crude Oil alone and that a Corexit 9500A and Louisiana Sweet Crude mixture has the same toxicity as Louisiana Sweet Crude alone (EPA 2010c)
9/10	(Environmental Restoration) (Public Health) (Economic Issues) Navy Secretary Ray Mabus issues America's Gulf Coast: A Long Term Recovery Plan after the Deepwater Horizon Oil Spill, also known as the "Mabus Report". Report offers detailed plans for Gulf Coast Ecosystem Restoration Task Force, coordination of ongoing federal response efforts, NIEHS-led human health studies, economic recovery and health programming measures (Mabus 2010)
9/1/10	(Offshore Drilling Moratorium / Suspension / Permitting) (Claims Process / Legal) Application period opens for deepwater rig workers to apply for compensation from Gulf Coast Restoration and Protection Foundation / BRAF's \$100 million fund (BRAAF 2010)
9/7/10	(Environmental Restoration) (Commercial Fisheries) NOAA and EPA announce that no dead zones have been observed or are expected as part of BP Deepwater Horizon Oil Spill (Restore the Gulf 2010n) (Public Health) National Institutes of Health (NIH) announces a multi-year study to look at the potential mental and physical health effects from the oil spill in the Gulf region (Restore the Gulf 2010m)
9/15/10	(Spill Response & Cleanup) BP officially halts VOO program in FL, AL, and MS. In these three states, the program spent \$500 million and hired 3,500 vessels (Kent 2010)
9/18/10	(Public Health) Louisiana Department of Health and Hospitals (LDHH) records 411 health complaints related to the BP oil spill from 4/25/10 to this date, of which 325 came from cleanup workers (LDHH 2010)
9/19/10	(Spill Response & Cleanup) Admiral Allen announces Deepwater Horizon leak is over after completion of relief well (National Commission 2011: 169)
9/20/10	(Claims Process / Legal) Judge Barbier groups legal claims from Deepwater Horizon into "bundles" based on category of damage under OPA 1990 provisions (Alliance for Justice 2011: 57) (Spill Response & Cleanup) BP's Alabama VOO contractor holds two-day workshop to assist processing VOO participants' invoices, promising all captains should be paid within a month (Ferrara 2010)
9/23/10	(Claims Process / Legal) (Spill Response & Cleanup) Feinberg announces GCCF will not deduct earnings from participation in VOO program from payments made to claimants, and refuses "to accept over 4,000 bogus claims for 'subsistence'" received in the past month (GCCF 2010b)
9/25/10	(Claims Process / Legal) GCCF announces it is implementing new and improved procedures to expedite claims processing (GCCF 2010c)

Date	Event
9/29/10	(Environmental Restoration) A Notice of Intent to conduct restoration planning was published in the Federal Register, marking the transition from the pre-assessment phase to the injury assessment and restoration phase of NRDA (USFWS 2011)
9/30/10	(Claims Process / Legal) (Offshore Drilling Moratorium / Suspension / Permitting) Application period closes for deepwater rig workers to apply for compensation from Gulf Coast Restoration and Protection Foundation's fund (BRAAF 2010). Only 624 applications were received of which only 343 were compensated out of an estimated 7,590 eligible workers; deepwater drilling companies largely retain their skilled offshore workers through the suspension of drilling (GNO, Inc. 2011) (Offshore Drilling Moratorium / Suspension / Permitting) BOEMRE announces new regulations on offshore drilling, makes new regulations prerequisite for all shallow and deepwater offshore drilling permits (National Commission 2011: 152)
10/1/10	(Commercial Fisheries) NOAA reopens 5,628 square miles of Gulf waters off Louisiana to fishing (Restore the Gulf 2010a) (Spill Response & Cleanup) National Incident Command stands down (National Commission 2011: 170)
10/4/10	(Claims Process / Legal) (Economic Issues) GCCF Administrator Feinberg announces geographic proximity to the BP oil spill will no longer affect eligibility to collect for economic harm (GCCF 2010d)
10/4-6/10	(Public Health) (Environmental Restoration) Environmental justice groups meet for first time in Weeks Bay, Alabama, AL, draft the Weeks Bay Principles for Gulf Recovery and the slogan "The oil is still here and so are we." (Gulf Restoration Network 2010)
10/12/10	(Offshore Drilling Moratorium / Suspension / Permitting) Department of the Interior lifts suspension on deepwater drilling seven weeks ahead of scheduled expiration on November 30 (National Commission 2011: 152)
10/22/10	(Commercial Fisheries) NOAA reopens 7,037 square miles of Gulf waters south of the Florida panhandle to commercial and recreational fishing (Restore the Gulf 2010)
10/23/10	(Commercial Fisheries) BP announces \$20 million in funding for seafood inspection and marketing to Florida state government (National Commission 2011: 169)
10/29/10	(Public Health) NOAA and FDA announce chemical tests for DOSS, component in dispersants used on Deepwater Horizon oil spill, detect levels below Level of Concern (FDA 2010)
11/1/10	(Offshore Drilling Moratorium / Suspension / Permitting) GNO, Inc. reports the de facto shallow water drilling moratorium ended by this date because the number of approved shallow water permits returned to historical average (GNO, Inc. 2011) (Economic Issues) (Commercial Fisheries) (Public Health) (Environmental Restoration) BP announces \$218 million grant to Louisiana state government for seafood testing and promotion (\$48 million), tourism promotion (\$30 million), and coastal restoration (\$140 million) (Office of the Governor of Louisiana 2010c)
11/2/10	(Public Health) Rally at Louisiana State Capitol to hold BP accountable for dispersant use, human health effects of oil spill (Jamail 2010)
11/3/10	(Spill Response & Cleanup) Some 11,000 cleanup workers, 1,000 VOO boats still actively working across the Gulf Coast (Robertson and Rudolf 2010)
11/4/10	(Offshore Drilling Moratorium / Suspension / Permitting) BOEMRE announces it will start work on a Supplemental Environmental Impact Statement (SEIS) for the remaining oil and gas lease sales in the Gulf scheduled in the 2007-2012 Outer Continental Shelf (OCS) Five-Year Plan, as part of assessment of environmental impact post-Deepwater Horizon (BOEMRE 2010c)

Date	Event
11/8/10	(Commercial Fisheries) Mississippi Department of Marine Resources opens some public oyster beds to tonging with a 10 sack per vessel day limit (Dow 2010)
11/10/10	(Commercial Fisheries) Louisiana Department of Wildlife and Fisheries reopens 98% of state waters to commercial fisheries by this date (Rodriguez 2010)
11/15/10	(Commercial Fisheries) After harvesting on public oyster beds opened in October in Western Louisiana, harvesting reopens in Terrebonne and Lafourche parishes and most of Barataria Bay. Public oyster beds east of the Mississippi River in Louisiana remain closed (Buskey 2010c)
11/19/10	(Claims Process / Legal) Thomas Perrelli, Associate Attorney General of the United States, writes letter to GCCF Administrator Kenneth Feinberg saying claims processing too slow and must be accelerated (Perrelli 2010)
11/20/10	(Public Health) Rally for the Truth held on Grand Isle, Louisiana, LA by environmental justice activists concerned over seafood safety, human health impacts of BP oil spill (Buskey 2010d)
11/22/10	(Claims Process / Legal) Harvard Law School Professor John Goldberg issues report on liability for economic loss under OPA 1990 requested by Kenneth Feinberg, GCCF Administrator. Report narrowly construes the ability to recover damages to claimants who can prove their right and ability to put property or resources to commercial use has been hindered by the oil spill (Goldberg 2010)
11/23/10	(Claims Process / Legal) Deadline to file for Six-Month Emergency Advance Payments (EAPs) from GCCF; GCCF begins offering interim and final claims payments (Alliance for Justice 2011: 9)
11/24/10	(Commercial Fisheries) NOAA temporarily re-closes 4,000 square miles of deep Gulf waters to shrimping for Royal Red shrimp after oil is brought up by some trawls (Restore the Gulf 2010q)
12/8/10	(Claims Process / Legal) By this date GCCF has received 455,000 six-month emergency claims, of which 167,000 had been denied, 158,000 paid, and 80,000 under review or requiring more documentation (Mobile Press-Register 2010)
12/13/10	(Claims Process / Legal) GCCF opens Quick Pay Final Payment option for spill claimants (Alliance for Justice 2011: 53)
12/15/10	(Claims Process / Legal) United Louisiana Vietnamese American Fisherfolks hold press conference, publish White Paper on Loss of Subsistence Use of Natural Resources claims to GCCF (Alexander-Bloch 2010; United Louisiana Vietnamese American Fisherfolks 2010)
1/3/11	(Offshore Drilling Moratorium / Suspension / Permitting) BOEMRE notifies 13 oil companies they may resume previously approved exploration and production activities without submitting revised plans (GNO, Inc. 2011)
1/27/11	(Claims Process / Legal) GCCF Administrator Feinberg and Vietnamese-American fishermen claimants for loss of subsistence use, among others, testify in U.S. Senate Ad Hoc Subcommittee on Disaster Recovery hearing (Alliance for Justice 2011: 55)
1/31/11	(Claims Process / Legal) (Commercial Fisheries) GCCF releases Dr. John W. Tunnell's report, prepared for the Facility, on oil spill effects on fisheries and recovery timelines (Tunnell 2011)
2/2/11	(Commercial Fisheries) NOAA reopens the waters closed to Royal Red shrimping the previous November (Restore the Gulf 2011a) (Claims Process / Legal) U.S. District Judge Carl Barbier rules that GCCF Administrator Feinberg is not independent from BP (Associated Press 2011)

Date	Event
2/18/11	(Claims Process / Legal)GCCF releases Final Rules Governing Payment Options, Eligibility, and Substantiation Criteria and Final Payment Methodology (Alliance for Justice 2011: 53)
2/28/11	(Public Health) National Institutes of Health (NIH) announces Deepwater Horizon oil spill study on human health effects among oil spill cleanup workers; first letters of recruitment go out for study to Gulf Coast residents (Alliance for Justice 2011: 59; Buskey 2011) (Offshore Drilling Moratorium / Suspension / Permitting) BOEMRE approves the first deepwater drilling permit since the Deepwater Horizon explosion and spill (BOEMRE 2011a)
3/8/11	(Economic Issues) BP awards Alabama a \$16 million tourism promotion grant (Alabama Office of the Governor 2011)
3/12-13/11	(Public Health) (Environmental Restoration) Cherri Foytlin, environmental justice advocate and wife of offshore oil worker affected by deepwater moratorium and suspension, begins The Road to Washington American Walk for Accountability, eventually walking from New Orleans to Washington, D.C. by April 20. March preceded by 1 United Gulf Festival gathering of environmental justice activists in Westwego, Louisiana, LA (Marks Field notes, 2011)
3/14/11	(Claims Process / Legal) GCCF Administrator Kenneth Feinberg reports processing 54% of all claims received. Of the 138,874 claims processed thus far, 99,905 are Quick Final Payments (GCCF 2011a)
3/16/11	(Claims Process / Legal) Ministers affiliated with Southern Christian Leadership Conference (SCLC) hold protest at BP's facility near Houma, Louisiana over problems with claims process (DeSantis 2011a)
3/17/11	(Spill Response & Cleanup) VOO participants hold meeting in Orange Beach, AL over unpaid vessel damage claims to BP (Ferrara 2011)
3/21/11	(Offshore Drilling Moratorium / Suspension / Permitting) Interior Department approves first Gulf of Mexico deepwater exploration plan with Post-Deepwater Horizon environmental review (Department of Interior 2011)
3/24/11	(Commercial Fisheries) Louisiana Department of Wildlife and Fisheries holds meeting on crab mortalities reported in coastal Louisiana in recent months (DeSantis 2011b)
3/29/11	(Claims Process / Legal) (Environmental Restoration) Women of the Storm, organized originally around post-Katrina recovery advocacy, rally in Washington, D.C. and lobby Congress for the Restore Act, a bill to dedicate 80% of BP oil spill fines and penalties to Gulf Coast recovery and coastal restoration (Tilove 2011)
4/9/11	(Public Health) Meeting held in south Louisiana by environmental justice activists and people with illness claims about human health effects of Deepwater Horizon oil spill (King 2011)
4/11/11	(Commercial Fisheries) Louisiana Department of Wildlife and Fisheries orders reopening of commercial fishing in portions of state inside waters within the Mississippi River Delta that were previously closed due to impacts from the spill. Over 99% of state waters now open for fishing (LDWF 2011a) (Economic Issues) BP awards \$30 million tourism grant to Florida (CNN Travel 2011a)
4/15/11	(Economic Issues) BP awards \$16 million tourism grant to Mississippi (CNN Travel 2011b)
4/17/11	(Offshore Drilling Moratorium / Suspension / Permitting) State of Louisiana reports 2,505 jobs lost to moratorium and suspension, several times fewer than estimates by state officials and economists in 2010 (Schmidt 2011)

Date	Event
4/18-23/11	(Commercial Fisheries) Louisiana Department of Wildlife and Fisheries opens some state inshore waters for special early shrimp season (Louisiana Seafood News 2011)
4/19/11	(Commercial Fisheries) NOAA re-opens last federal Gulf Waters to fishing, those nearest to Deepwater Horizon site (Restore the Gulf 2011b)
4/20/11	(Claims Process / Legal) (Public Health) One-year anniversary of the Deepwater Horizon blowout and explosion. Rallies in remembrance and in protest of spill response, claims process, and health concerns held in Point-a-la-Hache, New Orleans, Grand Isle, Louisiana, and across the Mississippi Gulf Coast. Deadline for plaintiffs to join Transocean's Limitation Action, potentially capping its liability for damages under Admiralty law (Alliance for Justice 2011: 41; Marks Field notes, 2011)
4/21/11	(Environmental Restoration) The Natural Resource Trustees enter into an agreement whereby BP will provide \$1 billion toward early restoration projects to address injuries to natural resources caused by the Deepwater Horizon oil spill (Deepwater Horizon Natural Resource Trustees 2011)
5/18/11	(Environmental Restoration) NOAA announces an end to the public scoping comment period on potential post-spill restoration projects (NOAA 2011)
6/2/11	(Commercial Fisheries) Oceana and other national environmental groups file notice to sue NOAA Fisheries for immediate closure of Gulf shrimp fishery because of concerns over large increases in sea turtle mortalities observed in the Gulf and claims of rising violations of Turtle Excluder Devices (TED) requirements on shrimp trawls (Oceana 2011)
6/22/11	(Commercial Fisheries) (Claims Process / Legal) Louisiana Shrimp Association hosts rally at Louisiana State Capitol over GCCF compensation issues and environmentalist threat to sue over TED regulations, claiming the spill, not themselves, are at fault (DeSantis 2011c)
6/29/11	(Social Services & NGOs) Community Foundation of South Alabama receives \$500,000 in funding from national charity for oil spill-related social service programming (Andrews 2011)
7/8/11	(Claims Process / Legal) BP issues a federal court filing arguing that recovery of the Gulf Coast economy means very few claimants will incur future losses from the Deepwater Horizon oil spill (Robertson 2011)
7/20/11	(Social Services & NGOs) Greater New Orleans Foundation announces \$1.1 million in grants to southeast Louisiana nonprofits for oil spill-related services (Alexander-Bloch 2011)
8/3/11	(Commercial Fisheries) NOAA denies last of three separate petitions from environmental groups requesting emergency closures or restrictions on shrimping because of the large number of sea turtle deaths in the Gulf (MSU Extension 2011)
8/4/11	(Claims Process / Legal) Reverend Art Rocker, minister serving on the board of the Southern Christian Leadership Conference (SCLC), Derek Gregory, and Police Chief of Pritchard, AL participate in delegation to London, England to meet with BP over unpaid oil spill claims of coastal residents (McClendon 2011)
8/16/11	(Claims Process / Legal) GCCF, citing evidence of Gulf Coast economic recovery, releases updated methodology for calculating Interim Payments in 2011, requiring claimants to demonstrate a 5% revenue and/or earnings growth rate over 2010 to qualify for future interim payments. GCCF also releases updated methodology for oyster leaseholders employing a "Future Risk Multiple" that pays higher amounts to leaseholders in certain geographic areas (GCCF 2011b)
8/21/11	(Environmental Restoration)NRDA Trustees announce \$1 billion agreement with BP to fund early Gulf Coast restoration projects (Restore the Gulf 2011c)

Date	Event
8/22/11	(Commercial Fisheries) LDWF opens Fall inshore shrimp season after a May inshore shrimp season of historically below-average total landings (Associated Press 2011b) (Claims Process / Legal)GCCF issues one-year report on its operations, claiming it has largely succeeded in its primary objective, has paid more than \$5 billion, has processed 97% of claims, and not one of 1,126 claims appealed to the USCG have been overturned (GCCF 2011c)
9/1/11	(Claims Process / Legal)GCCF closes satellite offices in Morgan City, Grand Isle and Lafitte, Louisiana and reduces service hours at all offices to five days per week (Alford 2011)
9/9/11	(Spill Response & Cleanup)Tropical Storm Lee reveals tar and oil mats on Fourchon Beach, LA (Schlefstein 2011)
9/14/11	(Spill Response & Cleanup)(Claims Process / Legal) Bureau of Ocean Energy, Management, and Enforcement (BOEMRE) / U.S. Coast Guard Joint Investigation Team (JIT) issues second, BOEMRE, volume of its final report on the Deepwater Horizon disaster (BOEMRE 2011c)
9/26/11	(Commercial Fisheries) Study published in the Proceedings of the National Academy of Sciences reports biological changes found in juvenile killifish exposed to BP spill oil could signify trouble for the reproduction of coastal fish populations (Whitehead et al. 2011)
9/28/11	(Claims Process / Legal) Orange Beach, AL officials reach a settlement with BP for a portion of tax revenues lost during summer 2010 (Ferrara 2011b)
10/11	(Commercial Fisheries) Gulf shrimpers report very poor white shrimp catches in Fall inshore season (Roberts 2011; Zullo 2011)
10/5/11	(Environmental Restoration) Gulf Coast Ecosystem Restoration Task Force (GRTF) releases their Gulf of Mexico Regional Ecosystem Restoration Strategy (GRTF 2011)
10/7/11	(Public Health)Gulfsource.org, a website operated by the Louisiana state government, comes online offering data on state and federal seafood, water, and soil testing for chemical contamination from the BP oil spill (Buskey 2011b)
10/12/11	(Public Health) Paper critical of FDA's seafood consumption risk assessment following BP spill published online in Environmental Health Perspectives (Rotkin-Ellman et al. 2011; Dickey 2011)
10/15/11	(Offshore Drilling Moratorium / Permitting) Anadarko Petroleum, a 25% stakeholder in the Macondo well, agrees to pay BP \$4 billion as settlement of claims from Gulf of Mexico oil spill. Payment will be made directly into the victim compensation fund (Werdigier 2011)
10/27/11	(Environmental Restoration) NOAA finds Brucella bacteria to be the cause of death in five necropsied Gulf bottlenose dolphins (Schleifstein 2012)
11/7/11	(Claims Process / Legal) Plaintiffs' Steering Committee (PSC) involved in MDL oil spill case files request to Judge Barbier to receive 6% of the value of GCCF payments and 4% of government payments after this date to cover claimed legal costs (Schwartz 2011)
11/15/11	(Offshore Drilling Moratorium / Suspension / Permitting)Companies working in offshore waters under federal jurisdiction must achieve compliance with the Safety and Environmental Management System (SEMS), issued by the BOEM, by this date (BOEM 2012)
11/30/11	(Claims Process / Legal) GCCF announces commercial shrimpers, crabbers, and finfishermen will hereafter receive four times their documented 2010 losses in final claims payments; payments to previously paid to fishermen will not be retroactively increased from the former standard, double 2010 losses (GCCF 2011d)

Date	Event
12/1/11	(Social Services & NGOs) Greater New Orleans Foundation grants another \$1.3 million to southeast Louisiana non-profits, part of a \$5 million granting requirement by year's end from the Foundation's \$20 million oil spill recovery fund (Alexander-Bloch 2011b)
12/1/11	(Environmental Restoration) Coalition of environmental organizations publishes "Sunshine on the Gulf" report, arguing for more public input and involvement in selection and vetting of restoration projects funded with oil spill fines and NRDA payments (Gulf Future 2011)
12/14/11	(Offshore Drilling Moratorium / Suspension / Permitting) U.S. government auctions first offshore Gulf of Mexico oil and gas tracts since Deepwater Horizon disaster (Sayre 2011) (Environmental Restoration) NRDA trustees release the Deepwater Horizon Draft Phase I Early Restoration Plan & Environmental Assessment (DERP/EA) for formal public comment. The DERP/EA describes the restoration projects that have been initially selected to receive funding through the \$1 billion Early Restoration agreement (Buskey 2011c) (Environmental Restoration) Mississippi, Alabama, Louisiana, and Florida are each allocated two early restoration projects through the NRDA process, totalling \$57 million in all, \$28 million of which are directed to Louisiana (Nelson 2011; Buskey 2011c)
12/16/11	(Claims Process / Legal) BP settles with Cameron International, manufacturer of the BOP on the Deepwater Horizon. In the agreement, the companies drop legal claims against the other, Cameron pays \$250 million to BP for cleanup and claims payments, and is shielded from further cleanup liabilities (Burdeau 2011)
12/29/11	(Claims Process / Legal) Judge Barbier grants Plaintiff's Steering Committee's request to create reimbursement fund and assess 6% from payments to GCCF claimants after 11/7/11 (Mowbray 2011)
1/3/12- 1/4/12	(Claims Process / Legal) GCCF Administrator Ken Feinberg halts claims payments for one day while seeking clarification of Judge Barbier's 12/29 order (Associated Press 2012)
1/6/12	(Claims Process / Legal) Louisiana Attorney General "Buddy" Caldwell challenges the legality of the PSC's proposed compensation fund before the 5th Circuit U.S. Court of Appeals (Associated Press 2012b)
1/3/12- 1/9/12	(Economic Issues) (Commercial Fisheries) BP funds the "Gulf Coast Seafood and Tourism Bash" linked to the Sugar Bowl and BCS Championship football games in New Orleans, promoting Gulf Coast travel and seafood through nationwide advertising and local events (Burdeau 2012)
1/16/12- 1/21/12	(Environmental Restoration) Early Restoration public comment meetings are held in three Mississippi Gulf Coast locations to obtain feedback on proposed restoration projects (Kirgan 2012)
1/18/12	(Claims Process / Legal) Louisiana Attorney General reverses position on PSC 6% fund, dropping his opposition following Judge Barbier's appointing him Co-coordinating counsel for state interests in the MDL and removing environmental penalties from the 4% collection from government payments (Mowbray 2012a)
1/24/12	(Claims Process / Legal) BP denies the town of Gulfport, Mississippi's claim for \$11.8 million in lost tax revenues and community damages; the city was previously offered \$76,000 by BP for tax losses (Associated Press 2012c)
1/24/12	(Economic Issues) (Commercial Fisheries) Louisiana Seafood Promotion and Marketing Board's Executive Director announces plan to buy naming rights to the New Orleans Arena, home of the New Orleans Hornets NBA team, with \$5.2 million of the Board's \$30 million in BP seafood promotion money. Plan is criticized by commercial fishermen, some Board members (Bayles 2012)
1/29/12	(Environmental Restoration) (Claims Process / Legal) The Restore Act, a bill to direct 80% of oil spill environmental fines to Gulf states for coastal restoration and other purposes, faces difficulties as some

Date	Event
	Congress people seek offsets in other federal spending to cover funds lost to Federal treasury (Altman 2012)
1/30/12	(Economic Issues) (Offshore Drilling Moratorium / Suspension / Permitting) GNO, Inc. publishes report finding that many Gulf Coast small and medium oilfield service businesses were “hidden victims” of the offshore moratorium and suspension, losing revenues, cash reserves, and employees (GNO, Inc. 2012a)
2/16/12	(Claims Process / Legal) (Environmental Restoration) Smaller version of Restore Act advances in U.S. House as attachment to larger energy bill (Buskey 2012)
2/17/12	(Claims Process / Legal) (Environmental Restoration) MOEX Offshore, owner of 10% of the Macondo well, settles its liabilities with the Federal government for the Deepwater Horizon spill for \$90 million; \$65 million of which goes to Gulf states, \$13.5 million for Louisiana environmental projects (Schleifstein 2012a)
2/26-28/12	(Public Health) (Claims Process / Legal) (Environmental Restoration) Gulf Gathering 2012 held in Alabama; Sponsored by a number of environmental non-profits, the gathering of regional environmental justice advocates addresses dedicating BP fines to coastal restoration, creating local employment through coastal restoration, and forming a Regional Citizens’ Advisory Council to oversee the offshore oil and gas industry (Gulf Restoration Network 2012)
3/2/12	(Claims Process / Legal) (Public Health) BP and Plaintiffs’ Steering Committee announces \$7.8 billion uncapped settlement to cover outstanding individual and business claims, of which \$2.3 is devoted to a capped fund for commercial fisheries economic claims. Trial beginning date postponed indefinitely; GCCF to be replaced by new claims process overseen by federal court wherein medical, subsistence use, VOO-related damages, and real property loss claims are promised to be paid (Schwartz 2012)
3/5/12	(Offshore Drilling Moratorium / Suspension / Permitting) 40 deepwater drilling rigs reported to be working in the Gulf of Mexico on this date, compared to 25 one year ago and 33 at the time of the Deepwater Horizon disaster (Krauss and Broder 2012)
3/8/12	(Claims Process / Legal) Judge Barbier approves BP / PSC agreement to transition claims process from GCCF; Ken Feinberg replaced by transition coordinator Lynn Greer, later to court-appointed claims administrator Patrick Juneau (Kunzelman 2012) (Environmental Restoration) U.S. Senate approves Restore Act as part of larger transportation bill (Alpert 2012)
3/23/12	(Claims Process / Legal) Court-supervised claims administrator announces new claims process has paid 1,096 claimants \$27 million since the changeover from GCCF, has made 897 new payment offers, made 1,918 requests for additional documentation and denied 2,506 claims (Hammer 2012a)
3/31/12	(Offshore Drilling Moratorium / Suspension / Permitting) Greater New Orleans, Inc. reports average federal offshore drilling permit approval time in February 2012, with the exception of one permit’s very long lag time, returned to the average time in the year before the spill. In February 2012, shallow water drilling permit approvals were 41% above the pre-spill average and deepwater approvals 279% above that rate. In March, shallow water approvals were equal to the one year pre-spill average, deepwater approvals 17% below the average (GNO, Inc. 2012b)
4/17/12	(Offshore Drilling Moratorium / Suspension / Permitting) (Environmental Restoration) Former National Oil Spill Commissioners issue “report card” on regulatory reforms two years after beginning of BP oil disaster; Federal executive and oil industry given grades of B and C+, Congress given a D, primarily for failure to pass offshore industry regulatory legislation and Restore Act (Tilove 2012)

Date	Event
4/18/12	(Claims Process / Legal) (Commercial Fisheries) (Public Health) BP / PSC economic and medical claims settlements details filed with the court. Covering more than 1,000 pages, the proposed settlements detail what kind of people and businesses in what areas are covered and excluded from different levels of recovery, the amounts claimants may receive, evidentiary standards for claimants, and how multiple new settlement-funded health care and health monitoring programs will be implemented over as long as 21 years (New Orleans Times-Picayune 2012a)
4/19/12	(Claims Process / Legal) Executive summary of Justice Department-ordered audit of GCCF released. The investigation found more than 10,000 claimants were paid less than they deserved or were improperly denied, representing 4.5% of all unique paid GCCF claimants. Court-appointed claims administrator promises to pay some 7,300 claimants for whom correct claims numbers are available; 2,600 other claimants, despite being wrongly denied or underpaid, will get nothing more because they did not present sufficient documentation (Hammer 2012b) (Environmental Restoration) (Claims Process / Legal) (Public Health) (Social Services & NGOs) (Commercial Fisheries) Institute for Southern Studies publishes two year oil spill anniversary report detailing community non-profit initiatives, ongoing coastal land loss and lack of restoration funding, environmental health concerns following the spill including cleanup worker health issues, commercial fishers' experiences, and criticism of the proposed BP / PSC settlement (Sturgis and Kromm 2012) (Environmental Restoration) Stop-gap federal transportation bill with Restore Act provisions passes the U.S. House and goes to conference committee to reconcile with Senate version (New Orleans Times-Picayune 2012b)
4/20/12	Two-year anniversary of the beginning of the Deepwater Horizon disaster; multiple commemorative events, protests, conferences and report releases held in several locations including Grand Isle, New Orleans, and Baton Rouge, Louisiana, Biloxi, Mississippi, and Tampa, Florida (Marks Field notes, 2012; Schliefsstein 2012c) (Public Health) Louisiana Environmental Action Network (LEAN) issues results of human health survey conducted primarily with clients of private detoxification clinic, finding that surveyed individuals report range of illnesses and symptoms and claim exposure to oil through cleanup work, residence near the coast, or swimming in the Gulf (Wold 2012)

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CHAPTER THREE: CONTEXT

Brian Marks, Tom McGuire, Diane Austin, and Ben McMahan

The Gulf Coast region is diverse, extending from Brownsville, Texas to the southern tip of Florida. The area most directly affected by the spill, and the focus of this study, includes coastal Louisiana, Mississippi, and Alabama, states that are smaller and slower growing than Texas and Florida (National Ocean Service 2011). While this coastal area is certainly part of the U.S. South and shares such demographic characteristics as relatively high poverty rates and low levels of educational attainment, this area is nevertheless distinct from counties and parishes in the northern parts of these states (Wallace et al. 2001). The coastal regions of Mississippi and Louisiana are more densely populated and, in all three states, Interstate 10 is considered a significant dividing line, with the region to the south better off economically, in large part due to the natural resources extracted from the coastal areas and offshore in the Gulf.

Despite what the Gulf states have in common, efforts to organize regional planning, economic development, and educational consortia have had limited success. Recent efforts include the Gulf of Mexico Alliance (GOMA), a partnership of all five U.S. Gulf states, initiated in 2004 to increase regional collaboration to enhance the ecological and economic health of the Gulf of Mexico (GOMA n.d.). The Gulf of Mexico States Accord (GOMSA) is an international cooperative agreement initiated in 1995 by the 11 states bordering the Gulf of Mexico, including the six Mexican states. The corresponding Gulf of Mexico States Partnership, Inc. was initiated as a private sector counterpart open to businesses, chambers of commerce, economic development organizations, and NGOs to advocate for government policies that promote the economic growth and development of the Gulf of Mexico states. The Partnership also supports the Gulf of Mexico Congressional Caucus in the creation of new regional initiatives in the areas of transportation, homeland security, energy, environment, economic development, education, and international trade in the Gulf region (Gulf of Mexico States Partnership, Inc. 2005).

The Gulf of Mexico itself supports marine industries – including commercial seafood, shipping, and petroleum—and tourism. According to 2010 data from the Bureau of Labor Statistics (cited in National Ocean Service 2011), average annual wages are highest in manufacturing (\$45,471) and mining and natural resources (\$43,447), while the lowest are in leisure and hospitality (\$14,109). The petroleum industry generates employment in manufacturing and in mining and natural resources. The following section provides a brief introduction to the petroleum industry (see also Chapter 1, Volume II).

3.1. THE PETROLEUM INDUSTRY IN THE REGION

Tom McGuire and Diane Austin

The 1901 discovery of the huge Spindletop oilfield in east Texas, shortly followed by a field at Jennings, Louisiana, launched commercial oil production in the Gulf Coast region. The use of petroleum as fuel for military vehicles during World War I increased its strategic significance, and by the 1920s, oil development began moving into Louisiana's swamps, marshes, and inland lakes (see also Chapters 8 and 9 in this volume and Chapter 1 of Volume II). In 1921, the state of Louisiana issued its first coastal zone oil lease, and land development

companies began acquiring huge tracts of land in the coastal parishes. Petroleum exploration and production continued through the Great Depression, and by the latter part of the 1930s seismic crews had crisscrossed Louisiana's swamps and marshes and entered the waters of the Gulf of Mexico. Initially, the oil and gas industry attracted experienced oilfield workers, many from Texas, Oklahoma, and northern Louisiana, who were referred to locally as "Texiens." Promoters used meetings and public relations campaigns to generate support and built camps to house workers in remote locations such as Leeville and Venice. Amid tough economic times with few alternatives, many southern Louisiana residents were attracted to the petroleum industry by even the prospect of revenues and high-paying jobs. The French-speaking Cajuns had difficulty getting into the industry at first, but trappers, lumber workers, and others with knowledge of the woods, swamps, and marshes were soon hired to guide seismic crews, build roads, and carry equipment. They incorporated oil industry jobs into their diverse seasonal occupational patterns (Austin 2006a; see also Gramling 1989).

In 1937, Secretary of Interior Harold Ickes took steps to establish national control over the production of oil and gas, resulting in a congressional resolution that declared lands under the marginal seas of all the coastal states to be part of the national public domain. World War II further hastened the growth of the oil and gas industry as oil was once again recognized as critical to the war effort. Though activity in the Gulf was halted during the war, in the years immediately following petroleum development accelerated both onshore and off. By the late 1930s, oil wells were visible across southern Louisiana (Figure 3.1). Louisiana's oil and gas production peaked in the early 1970s, but the state's dependence on oil and gas for revenues, primarily from royalty payments and severance taxes, and for jobs has continued, albeit at a lower level than at the peak of production (Louisiana Public Square 2006).

The petroleum industry developed differently in Alabama. Natural gas was first discovered in northwest Alabama in the late 1880s and early 1900s, but these early discoveries received little attention and the industry had little impact until the first major oil discovery occurred in 1944. Eleven years later, the largest field east of the Mississippi River at the time was discovered in Mobile County. The industry did not move offshore, though, until more than two decades later. In 1968, Mobil Oil began investigating the potential for oil in Mobile Bay, setting off a stream of protests from environmentalists concerned about potential contamination of the bay. In 1978, with new environmental protections in place, Mobil drilled its first well in the bay and discovered the largest gas field east of the Mississippi. Offshore development prospered there and, as of 2007, had sent \$2.1 billion worth of royalties to Alabama's Heritage Trust Fund, the interest from which is used to help pay for the state's education and infrastructure needs (Cockrell 2012).

The first major oil discovery in Mississippi occurred in 1939 in Yazoo County in the Delta region in the central part of the state (Hughes 1993). This was followed by numerous discoveries, and central Mississippi has remained an oil-producing region since then; by 2001, Wayne County alone had produced over three million barrels of oil and six billion cubic feet of gas (Mississippi Department of Environmental Quality 2002). Of the state's coastal counties, only Hancock has had significant oil production. In the 1970s, when the offshore petroleum industry experienced rapid growth and expansion, central Mississippi became an important source of labor and many residents in that region still work offshore (Prakash forthcoming).



Figure 3.1. Truck belonging to L.E. Daviet Lumber Co. in Larose carrying mud and background.
Source: Dick Guidry, Offshore Oil and Gas History Project. October 2001.

The movement of oil rigs and platforms into the Gulf of Mexico attracted the attention of both government and industry leaders. After a series of legal cases between the federal government and coastal states over ownership of offshore lands and their mineral resources, collectively known as the Tidelands cases, Congress enacted the Outer Continental Shelf Lands Act (OCSLA) in 1953. The legislation acknowledged federal ownership of lands outward from three miles off coastal states to the edge of the OCS and established policies and procedures for leasing and developing mineral resources on and below the ocean floor. Initial responsibility for regulating the fledgling development was given to two agencies within the Department of the Interior that already had experience in managing onshore oil and gas resources, the Bureau of Land Management (BLM) and the U.S. Geological Survey (USGS). As leasing activities expanded, a new agency within Interior, the Minerals Management Service (MMS), was established in 1982 to promote the exploitation of offshore resources, regulate their exploration and development, and collect revenues for the federal treasury.

The procedures for making offshore oil and gas resources available to production companies evolved over the years. The OCSLA stipulated that tracts of ocean bottom, no larger than 5,760 acres, be auctioned through competitive, sealed, bids. The legislation gave the option of some combination of cash bonuses and royalties on the extracted hydrocarbons. Following the practice of the State of Louisiana for its inshore oil leases, the federal government instituted a cash bonus/fixed royalty system. Winning bidders had, generally, five years to start drilling on their tracts, while paying an annual rental fee prior to bringing in wells. Once in production, royalties of 12.5% would kick in (Priest 2008a:95).

The initial lease sales occurred in 1954. Petroleum companies nominated tracts on the shelf they were interested in, and the Conservation Division of the USGS auctioned tracts off Louisiana and Texas, raising the royalty rate to 16.7% (roughly reflecting Louisiana's going rate) and assessing a \$3 per acre rental fee. The initial sale garnered \$129.5 million from 23 companies for 417,221 acres (Priest 2008a:97).

As the industry expanded into the Gulf, petroleum and oilfield service companies—including fabrication and shipyards; boat, helicopter, and trucking operations; and pipeline and wireline companies—rapidly came to dominate local economies, spreading both positive and negative impacts. Existing technologies had to be modified to be used over open water and in the path of hurricanes there (Pratt 2008). With oil prices high, the industry boomed in the 1970s, unemployment rates in the region were the lowest in the nation, and coastal state coffers filled. Under Section 8(g) of the 1978 amendments to OCSLA, the five Gulf Coast states, California, and Alaska began to receive from the federal government revenues generated from the leasing of lands within three miles of their seaward boundaries and containing one or more oil and gas pools or fields underlying both the state lands and the OCS. The state governments determined how they would spend their monies. Louisiana, for example, designated the funds be used for education.

Coupled with a national recession, the booming petroleum industry attracted people to the region. Increasingly, locals were hired as wage labor in the industry, though it was well into the 1970s before many residents were hired into supervisory positions or women and non-white residents could get offshore jobs (Austin 2006a). Offshore work was dangerous and cyclical, but workers accepted the risk in exchange for economic rewards and satisfying jobs (Austin, McGuire, and Higgins 2006). Though women across the region had actively taken part in trapping, fishing, and agricultural production for centuries, and had had significant roles in the offshore petroleum industry since World War II, they remained largely hidden in offices and clerical positions until this period when employers were forced by federal civil rights laws and guidelines to begin hiring them in offshore jobs (Austin 2006b). The relatively high-paying jobs lured young people from school and contributed to high dropout rates. A relatively permanent class of unskilled labor from urban areas, such as New Orleans, was used to fill the least desirable positions, such as tank cleaning and sandblasting, and was housed in labor camps established to serve the industry (Higgins 2005).

As exploration and production moved farther offshore, changes included the adoption of new technologies, new patterns of work scheduling (with shifts of 14 days on and 14 days off being most common), and recruitment of workers from greater distances. In the midst of the turmoil, in 1983, President Reagan's Interior Secretary introduced a significant change in leasing policy. The new "area-wide leasing", in which entire planning areas in the OCS were offered up for bid, left the existing practice of industry-initiated track nominations. The first area-wide Gulf lease sale in 1984 offered 37,867,762 acres. In 1975 the record number of acres offered in a single sale was 2,870,344 (Gramling 1996).

Despite the success of the first sale, the petroleum industry suffered a severe downturn in the mid-1980s; the Gulf of Mexico was called "the Dead Sea" by industry insiders, and cars in cities such as Lafayette and Morgan City sported bumper stickers reading, "Last one out, please turn out the lights." The industry responded to the downturn with consolidation and restructuring. Service companies of all types responded by downsizing, filing bankruptcy, and laying off workers. Employees recruited from outside the region and even many coastal residents left the region in search of jobs elsewhere. The population decline and decrease in state and local tax revenues led to other social problems (Gramling and Brabant 1984; Laska et al. 1993). States like Louisiana raised sales, corporate franchise, and gasoline taxes and lifted some exemptions for food, drugs, and utilities to make up for lost revenues, resulting in even more regressive tax structures (Richardson 1988; Davis 1988).

The industry began to rebound in the 1990s. The Deepwater Royalty Relief Act of 1995 (DWRRA), giving the Secretary of the Interior expanded authority to grant royalty relief for deepwater (more than 200 m) and shallow water deep gas wells (15,000 feet of vertical depth), was designed to spur work in these "frontier" areas, suspending royalties on variable quantities of oil and gas, depending on the depth of the wells. The Energy Policy Act of 2005 extended additional relief incentives to ultra-deep gas wells (Humphries 2008). As of 2010, of the revenues collected on the OCS, roughly half—the bonus bids to lease tracts, annual rentals until the well is producing, and royalties on the quantities of oil and gas produced—were headed directly to the U.S. Treasury. A quarter of the revenues were sent back to states along the OCS, and much of the balance was placed in the Land and Water Conservation Fund, distributed to states for land acquisition purposes (Humphries 2005). As industry activity accelerated, companies in all sectors faced labor shortages, reminiscent of the 1970s boom years, and devised strategies to attract employees. Few workers maintained loyalty to the industry, though, and many avoided it altogether, responding to ongoing cycles of layoffs, demotions, and cuts in hours and pay, along with increasing disparities between company profits and worker rewards (Austin, McGuire and Higgins 2006).

Lease Sale 206, in 2008, set a record for high bonus bids—the up-front price companies pay for the right to explore and produce—of \$3,667,668,246. The royalty rate was raised to 18 $\frac{3}{4}$ %, up from 16 $\frac{2}{3}$ %, but all of the bids qualified for some degree of royalty relief. MMS director Randall Luthi attributed this activity to record oil prices, the potential of deepwater reserves, and the pending expiration of many inactive deepwater leases. Some \$3.4 billion of the total bids were on tracts deeper than 400 m (1,312 ft). The deepest tract was at 10,092 feet (Paganie 2008). BP Exploration & Production Inc. put forward the highest number of accepted bids, 61 for \$335,009,589 (MMS News Release 2008). The company labeled one of these the Macondo Prospect; it was located in *Block* 252 of Mississippi Canyon, 50 miles southeast of Venice, Louisiana, in 5,000 feet of water. Anadarko, a partner on a bid in Green Canyon that was the highest in Lease Sale 206 at \$106 million, would buy a 25% interest in the Macondo effort.

BP, as the tract's operator, filed its initial exploration plan with the MMS in March, 2009. BP contracted the drilling work to Transocean, which spudded the well in October with its aging semisubmersible, *Marianas*. The rig had drilled 4,000 feet below mudline before being damaged by Hurricane Ida in November. Transocean then moved in a fifth-generation semisubmersible, built by Hyundai Heavy Industries Shipyard, Ulsan, South Korea, in 2000. *Deepwater Horizon*, designed to operate at water depths of 8,000 feet, resumed operations at Macondo in February 2010 (Cavner 2010). A series of human and technological failures led to the explosion of the rig on April 20 of that year.

3.2. HURRICANES

Ben McMahan

The explosion of *Deepwater Horizon* occurred in a region accustomed to disaster, but that familiarity was not uniformly beneficial in public and private response to the incident and its aftermath. Hurricanes are a seasonal reality for communities along the U.S. Gulf of Mexico, and every community must be prepared for them. This fuels the growth and development of various response capacities, especially in communities which have had repeated and recent experiences with them (McMahan 2012, 2013). The presence of the offshore oil and gas industry, along with support industries such as fabrication and shipbuilding, has led to an increased need and capacity for developing and implementing technologies that allow for continued safe operations within the hurricane region and despite the risk they pose (Pratt 2008), as well as general strategies for preparing for, and responding to, hurricanes and their aftermath (McMahan 2013). Along with the technologies that allow people to live and work in a hurricane region, weather prediction capabilities have advanced considerably. Threatening storms are identified early in their cycle, and possible paths are predicted based on probabilistic models and historical storm paths (Figure 3.2). This knowledge advances safety, but it also means that fear about possible threats, and consequences can form a prominent part of the local social landscape for most of the hurricane season as the buildup for one storm is likely to overlap with the wind-down for others. A related aspect of storms and their impact is what is termed locally, if not meteorologically, as the difference between the "clean" and "dirty" side of the storms. The counterclockwise rotation of hurricanes in the northern hemisphere means that wind speeds, rainfall levels, and storm surges are greater on the right hand or easterly side of the storm than on the left.

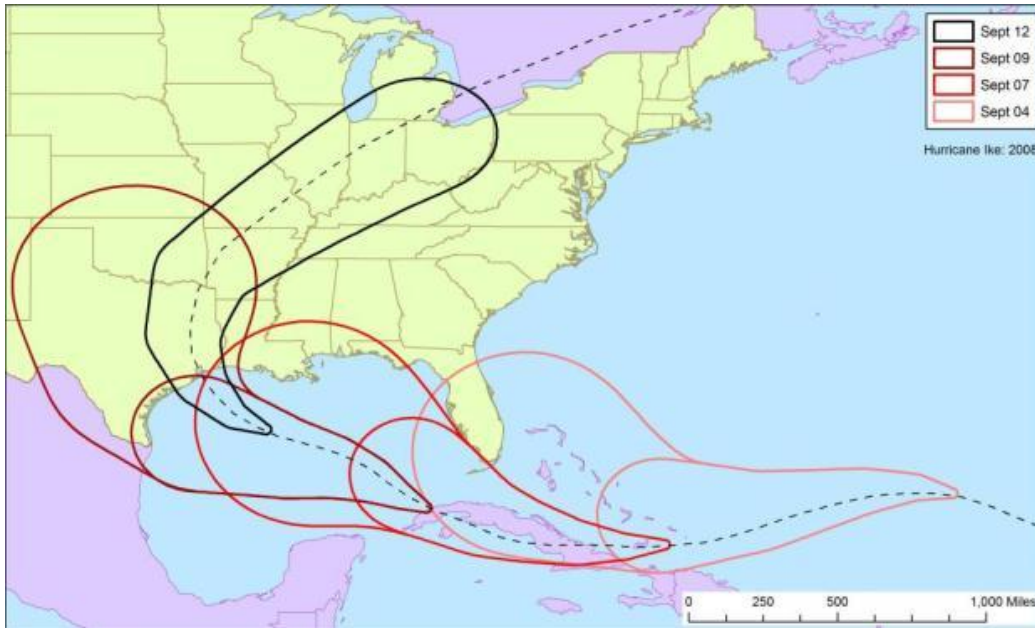


Figure 3.2. Cones of uncertainty associated with Hurricane Ike, 2008
 Source: Ben McMahan

When a hurricane has struck, or when a storm is thought to pose a particular threat to a region, an emergency declaration may be used to release federal funding and assistance. According to the Federal Emergency Management Agency (FEMA), a disaster may be declared if a state is "immediately threatened with impact from an existing hurricane or typhoon" assuming that the state has requested such a declaration based on the requirements in 44 CFR 206.35 and that FEMA has determined three additional requirements are met:

- 1) The National Weather Service determines the state is threatened by landfall from a major hurricane
- 2) The governor has declared a state of emergency
and
- 3) Mandatory evacuation orders have been issued for three or more counties/parishes (or any geographical area with a combined population of more than 100,000 residents) OR the declaration is necessary to provide federal assistance to meet emergency protection requirements before landfall that would overwhelm the capacity or capability of state resources (FEMA 2007).

Once this process is put in motion (i.e., the governor has determined that the scale of the disaster may exceed, or has exceeded, the capacity or capability of the state), FEMA determines the severity, magnitude, and impact of a disaster on which to base a recommendation to the president for supplemental disaster assistance. The primary factors in this assessment include:

- Amount and type of damage (number of homes destroyed or with major damage);
- Impact on the infrastructure of affected areas or critical facilities;
- Imminent threats to public health and safety;
- Impacts to essential government services and functions;
- Unique capability of the Federal government;
- Dispersion or concentration of damage;
- Level of insurance coverage in place for homeowners and public facilities;

- Assistance available from other sources (Federal, State, local, voluntary organizations);
- State and local resource commitments from previous, undeclared events; and
- Frequency of disaster events over recent time period (FEMA 2012).

Evacuations (mandatory and optional) also are frequently used to communicate the potential severity of a storm to a local population and encourage individuals to make plans for leaving in advance of landfall, which indirectly shifts the burden away from local police, ambulance, and general emergency response workers. The criteria for the implementation of evacuation orders can be somewhat nebulous, but they are typically declared on a local level, sometimes by county or parish emergency preparedness offices, sometimes by municipal or city officials, and often with the authority of the governor or the office of emergency preparedness. The degree to which declarations are enforced varies by circumstances, but they are sometimes run in conjunction with curfews, which are enforced by local police and which promote stability within the community and prevent property crimes while residents are away en masse.

The U.S. Gulf Coast region has a long history with storms, but intensified media coverage and improved prediction technologies have drastically altered how information about storms is communicated and processed, especially with regard to the timeline associated with oncoming storms. Partly owing to the character of national media coverage and the scale of disaster that is often required to grab the public's attention, most hurricane coverage has focused their acute effects- on the immediate damages caused by hurricane force winds and storm surges. Less emphasis has been placed on the longer term and more regional environmental effects, including those directly linked to chronic environmental change, coastal erosion, and land loss (McMahan 2010, 2012b). Also, beyond the impacted region, scant attention is paid to the longer-term process of recovery which can continue for many years. Recent storms such as Katrina and Rita in 2005, and Ike and Gustav in 2008, serve as prominent examples of storms which have received considerable media attention regarding the acute and immediate effects of the storm, but which have long term social impacts that are given less attention. Social inequality, coastal landscape degradation and loss, and insurance and coastal zoning issues serve to amplify the impacts of hurricanes and their aftermath. These social effects highlight intersections among social, environmental, economic, and political factors that are unique to each particular regional context; and further emphasize that hurricanes and their impacts are not simply meteorological events, but have broad social implications as well (cf. McMahan, forthcoming). This confluence of many of these factors is not limited to hurricanes, as this report will illustrate.

As a result of these intersections, and to deal with hurricane effects that are amplified by coastal land loss, local communities engage in self-regulatory behavior in anticipation of future risks or zoning changes, often involving migration away from the coast in order to avoid the threat of storm surges or the problems of coastal land loss and wetland degradation that is exacerbated by these surges particularly in coastal Louisiana and portions of Texas. Residents and business owners choose to move for multiple reasons. Some make pragmatic decisions after homes and businesses are damaged and they and rebuilding may not be justified in an at-risk area or to avoid future problems associated with living through such catastrophic damages. Other people have less of a say in the decision. FEMA digital flood insurance rate maps (DFIRM maps) may change the zonal designation, requiring costly flood insurance prior to rebuilding; or changes to municipal, parish or county zoning designations may lead to cost prohibitive zoning regulations. In short, Gulf coast residents have been moving from some of the communities closest to the coast and most subject to storm surge impacts, coastal erosion, and land loss, and

have often settled in communities not much further out of harm's way,² but often communities that are larger, more centralized, and without as restrictive zoning requirements or as subject to increased insurance costs (cf. McMahan, forthcoming).

Communities also address the intersections among social, environmental, economic, and political factors through modification of the local environment through technological interventions that allow for continued existence in these at-risk environments. Changes in zoning designations, in conjunction with a recognition of the potential impact of storms, have resulted in significant infrastructural investments to protect homes (typically through elevation as new and existing homes are placed on pilings, which can run between \$30,000 for a simple elevation to more than \$200,000 to elevate a larger slab foundation home), transportation corridors (the elevation of LA-1 for example; see Chapter 7), and whole communities (as community levees demonstrate). Whether a household or business is migrating or remaining in place, insurance forms an integral part of the decision making process (cf. McMahan, 2012b). Beyond zoning regulations which may prohibit rebuilding a structure lost to a hurricane's storm surge or costs that may be prohibitive, maintaining insurance coverage can become increasingly difficult as the insurance pool is slimmed by people leaving and as insurers drop out or reduce coverage (Thevenot 2007).

The *Deepwater Horizon* disaster complicated fears about hurricanes. As the spill continued, the worst case scenario became a storm entering the Gulf and threatening to: (a) disrupt cleanup operations; (b) further damage oil extraction infrastructure; and with perhaps the greatest effects, (c) push spilled oil far inland as part of a storm surge. As of time of this writing, Hurricane Isaac in 2012 had had substantial effects in Plaquemines Parish and had further complicated recovery and rebuilding efforts there, but the larger region has been spared any widespread hurricane effects similar to those seen in 2005 (Katrina and Rita) or 2008 (Gutave and Ike).

3.3. SOCIOECONOMIC IMPACTS OF OIL SPILLS AND OTHER TECHNOLOGICAL DISASTERS

Brian Marks

For centuries, residents of the Gulf Coast have faced natural disasters affecting where they live and how they earn a living. The industrialization of the Gulf Coast in the early 20th century compounded the hazards of river floods and tropical storms with new technological ones (Goldsteen 1992; Bea 1997; Roberts and Toffolon-Weiss 2001; Priest 2008b; Pritchard and Lacy 2011). Central to this industrialization was the nexus of oil production and transportation amid a complex of petrochemical plants. The 2010 explosion of the *Deepwater Horizon* showed a world audience how these hazards could become major disasters, but it was only one of a series of serious industrial accidents that had important socioeconomic consequences for coastal residents.

Observers have recognized for decades that modern, technologically complex and tightly linked systems are vulnerable to accidents caused by unanticipated interactions among their component parts (Perrow 1984). Such technological hazards have spurred sociopolitical efforts to regulate the uneven distribution of their associated risks (Beck 1999; Giddens 1999; Freudenburg 2000; Picou and Gill 2000). Worldwide, nuclear accidents, oil spills, chemical releases and mine collapses—disasters of modern technology, with massive impacts, and

² One parish official discussed how 98% of the structures within a given parish were in the floodplain according to DFIRM maps.

implicating interlocking, powerful institutions—provoke fierce social contestation, legal disputes stretching out decades, and enormous difficulties assigning blame and liability, assessing harm, and providing restitution. Major technological disasters can alter public policy, reshape the limits of citizen, corporate and government power, and cost many billions of dollars.

Some social scientists argue that, in contrast to natural disasters whose character as “Acts of God” may reduce social conflict among affected parties and encourage collective, public responsibility for recovery, technological disasters tend to divide communities, corroding social cohesion through secondary harms emerging from the process of disaster response and recovery (Freudenburg 1997; Edelstein 1988; Kroll-Smith and Couch 1990; Shrivastava 1987; Couch and Kroll-Smith 1991; Baum et al. 1983; Picou and Gill 2004). Factors in post-disaster community corrosion include psychological stress and uncertainty among the potentially affected, divisions within communities about the proper course of response and the assignment of blame, and drawn-out processes of fact-finding, claiming damages, contesting scientific knowledge, litigation, settlements, and cleanup and mitigation (Picou and Gill 1996; Palinkas et al. 1993; Impact Assessment, Inc. 2001, 2010; Marshall et al. 2004; Gill 2008; Picou et al. 2009).

Past oil spills worldwide and industrial disasters in the Gulf show how response to technological hazards in the region has evolved over time and what salient elements have remained consistent in how industry, government, and affected residents have dealt with the disasters. Several case studies illustrate this evolution.

3.3.1. Case Studies

The Texas City Disaster of 1947

In 1947, Texas City, Texas, southeast of Houston, was among the new centers of petro-industrialization along the Gulf Coast; several newly-arrived industrial facilities dominated the town’s landscape and its booming economy. On April 16, a ship loaded with ammonium nitrate fertilizer caught fire at the city’s port, then exploded with enormous force felt 100 miles away. Hundreds were killed in the first explosion and just after as nearby refineries went up in secondary blasts. Hours later, a second fertilizer-laden ship in the harbor, set alight by the first blast, exploded too, killing many rescuers and devastating what remained of the docks and industrial zone. Five hundred eighty-one people are believed to have been killed and some 3,500-5,000 wounded, representing about 1/4 of the town’s population, by the explosions which effectively destroyed 1/3 of the homes in Texas City and much of its industrial plant (MacKaye 1957; Stephens 1997; Minutaglio 2003).

The Texas City disaster also spawned years of litigation and an eventual Congressional claims process to compensate victims. Suing the federal government and numerous industrial concerns for negligence under the Federal Tort Claims Act, victims organized into a class action and won their initial case in Texas, but were overturned on appeal. The appellate court’s judgment was upheld by the U.S. Supreme Court in 1953, deciding that the government could not be held liable for negligence in what the Court determined were discretionary governmental functions or duties. Following the litigation loss, in 1955 Congress voted \$17 million in compensation to Texas City claimants, adjudicated by U.S. Army lawyers who eventually paid nearly 1,400 claims out of 1,755 filed (Minutaglio 2003).

Ixtoc I Disaster of 1979

In early June 1979, the offshore drilling rig Ixtoc I, operating in the shallow waters of the Bay of Campeche for the Mexican state-owned oil company PEMEX with a Mexican private partner and American rig operator, suffered a series of drilling mud circulation incidents. Rig owners decided to withdraw the drill string (the pipe and drill bit doing the drilling) and seal the problematic well, but on June 3rd, just as the last pipe lengths were being removed, two high pressure “kicks” caused a blowout. The large drill collar blocked the rig’s blowout preventer (BOP) from sealing the well and the uncontrolled flow of gas and oil onto the rig set it afire, eventually destroying it. One hundred forty million gallons of oil flowed from the broken well on the sea floor between June 1979 and March of 1980, making Ixtoc I the world’s largest oil spill at the time, as PEMEX, well control company Red Adair, and the U.S. Coast Guard attempted “junk shots” of steel balls, a “sombbrero” containment dome, and two relief wells to kill the leak (Myer 1984; Jernelov and Linden 1981; Berger and Godoy 2010).

Ixtoc I oil flowed generally north and west, fouling coasts in the Mexican states of Tabasco, Veracruz and Tamaulipas and the Texas shore (Myer 1984: 15-6). In Mexico, 9,000 metric tons of chemical dispersants were sprayed on the slick and booms, and *in situ* burning and skimming operations were attempted, without much success, to contain or destroy the oil. An estimated 50% of the light crude evaporated while 25% sank to the Gulf bottom, 6% was mechanically recovered or burned, 12% degraded in the sea and 7% came ashore, 6% in Mexico and 1% in Texas (Jernelov and Linden 1981: 302-3).

The effects of the Ixtoc I spill were the subject of several ecological (Jernelov and Linden 1981; Teal and Howarth 1984; ERCO/Energy Resources 1982) and socioeconomic studies (Macdonald 1980; Myer 1984; Restrepo & Associates 1982). Claimed economic damages in Texas totaled some \$400 million, inclusive of losses claimed by the tourism industry, commercial fishermen, and cleanup costs borne by the U.S. federal government and the State of Texas. Oil came ashore across broad areas of South Texas’ barrier islands, harming beach tourism in places like South Padre Island. Local tourism operators claimed the harm caused by oiled beaches during their peak summer season was magnified by negative national media attention that scared away potential guests for longer than the actual situation warranted. The spill reduced tourism spending on South Padre Island by 25 to 30% in 1979 and in coastal South Texas as a whole by 8 to 10%, for a cumulative direct loss of just under \$4 million and indirect losses reported in interviews to be much higher (Restrepo & Associates 1982: 75-77, 83-84). Texas commercial fisheries did not see large declines in landings or prices following Ixtoc (Restrepo & Associates 1982: 182), but area fishing closures and harm to the reputation of Gulf seafood were disruptive. Federal agencies attempted to address these problems by disseminating closure information to fishermen and implementing a seafood testing program (Myer 1984: 21). Damages in Mexico are more difficult to quantify, as few investigations were undertaken and their results were largely unpublished (Teal and Howarth 1984: 30-1; Schrope 2010). Mexican fishermen reported an oil “mousse” one foot thick clogged the shoreline and fisheries landings declined markedly in the year after the spill, and while tar mats are still found along the shore 30 years later, fisheries are reported to have generally recovered (Schrope 2010).

Months before the well was even capped, numerous lawsuits had been filed in U.S. District Court by fishermen, tourism businesses, the State of Texas, and the Federal government against the three companies involved in the Ixtoc well (Myer 1984: 27). PEMEX, the central defendant, claimed sovereign immunity as an entity of the Mexican government under the U.S.

Foreign Sovereign Immunities Act of 1976, an immunity upheld by the District court in a 1982 ruling. A year later, Sedco, the U.S.-based rig operator, offered to settle claims against the remaining defendants. The 1983 settlement paid \$2 million to the U.S. government and \$2.1 million to private plaintiffs (Myer 1984: 30).

Other Gulf of Mexico Spills

A number of other major blowouts took place on offshore drilling rigs in the Gulf of Mexico in the late 1950s and two more in 1970 and 1971 that resulted in spills, class action lawsuits, and safety fines (Priest 2008b: 142-6). Other Gulf oil spills include the *Burmah Agate* (Restrepo & Associates 1982) and *Mega Borg* (Associated Press 1990) tanker spills off Galveston in 1979 and 1990 and no fewer than 540 separate releases from shore facilities and offshore rigs during hurricanes Katrina and Rita in 2005 totaling 11 million gallons. This represented slightly more spilled oil than *Exxon Valdez* (Schleifstein 2010), although most of the oil was contained by existing berms surrounding industrial facilities and either recovered or evaporated in place (Anderson 2005). The collision of a tanker and barge in Port Arthur, Texas in January, 2010 spilled between 42,000–450,000 gallons of crude into the Sabine-Neches Waterway near the Gulf of Mexico (Gonzalez and Malik 2010).

The Santa Barbara Oil Spill

Outside the Gulf, large-scale oil spills have caused considerable environmental and economic damages to coastal regions and spawned numerous studies of spill socioeconomic impacts and legal precedents over compensation for those impacts. The 1969 Santa Barbara oil spill resulted from a rig blowout off the California coast that leaked 80–100,000 barrels of crude into the Pacific and onto adjoining beaches and rocky shores (Easton 1972). Images of the spill made the national public aware of the harm spills could do to scenery and wildlife, leading to tighter regulation of offshore drilling safety nationwide and initiating the process leading to the establishment of the California Coastal Commission which governs development in that state's coastal zone (Clarke and Hemphill 2002). Public cleanup costs amounted to \$640,000 and direct property losses some \$1.2 million; tourism in Santa Barbara declined and commercial fishermen were unable to work for months (Assaf et al. 1986: 227-31).

Lawsuits against Union Oil Company, the well's owner, sought compensation for these damages. The resulting case, *Union Oil v. Oppen*, decided by the Ninth Circuit Court in 1974, established precedent over who could claim losses for harm caused by oil spills into water. The earlier legal standard for relational economic losses from water pollution – harms not directly damaging one's property but still imposing a monetary loss, such as an oil spill hurting a hotel's business in a resort town with a public beach – came from *Robins Dry Dock & Repair Co. v. Flint* (1927), a ruling that held purely economic indirect losses without physical damage to one's property were unrecoverable in tort litigation. In *Union Oil v. Oppen* (1974), building on their earlier ruling in *Carbone v. Ursich* (1953) the Ninth Circuit generally upheld the *Robins* doctrine but made one crucial exception: commercial fishermen. The court differentiated fishermen from other claimants by arguing they possessed a special causal link between marine pollution and their economic harm despite not holding direct property rights over wild fish (Panoff 1998: 8-9; Perry 2011: 455). In the end, Union Oil paid the State of California and local governments \$9.5 million for cleanup and public property damages in 1974 and in 1977 paid \$7.8 million to private

claimants, most of that to owners of damaged coastal property and recreational vessels, of which \$880,000 went to commercial fishermen's income losses (Assaf et al. 1986: 230; County of Santa Barbara Energy Division 2012).

The Amoco Cadiz

In 1978, the *Amoco Cadiz* spilled 220,000 metric tons of oil off Brittany, France (Bonnieux et al. 1980), leading to a massive cleanup operation and disruptions to the region's tourism and fishing industries. Assessments of the spill's costs varied widely depending on the methods used and what kinds of losses were included, issues that became highly contentious in the 13 years of litigation in U.S. courts that followed the disaster (Bonnieux and Rainelli 1993). Two socioeconomic damages assessment efforts, one American (NOAA 1983) and the other European (Bonnieux et al. 1980), came up with divergent results based on these methodological differences. Including non-market losses to recreation and damage to non-commercial marine life increased the total loss considerably, as did measures to account for the full cost of the cleanup and tourism losses (Grigalunas et al. 1986). Amoco's lawyers assessed tourism losses much more narrowly than the plaintiffs' and argued the French government's cleanup costs were excessive because they banned the use of chemical dispersants in shallow waters. The estimated loss period for commercial fishers and oyster cultivators and their market share of the French seafood market were also contested in court, resulting in further reductions in damages awarded (Bonnieux and Rainelli 1993: 176-85). In the eventual settlement, reached in 1992 after Amoco appealed lower court orders to the Seventh Circuit Court of Appeals, the company had to pay approximately \$61 million to French claimants, \$19.8 million to Shell Oil for loss of their cargo, plus an additional \$148 million in interest accrued between the spill and the settlement (Maclean 1992; In re: *Amoco Cadiz* 1992), amounts French economists considered far lower than actual damages (Bonnieux and Rainelli 1993).

3.3.2. The *Exxon Valdez* Oil Spill

Studies of more recent oil spills in Europe and North America have contributed to understanding of the socioeconomic consequences of these disasters, such as methodologies for calculating economic damages (Grigalunas et al. 1998; Bonnieux and Rainelli 2004; Garcia Negro et al. 2009; Garza et al. 2009), the efficacy of claims processes (Loueiro et al. 2006) and spill preparedness and cleanup procedures (Kurtz 2008), affixing economic value to affected natural resources (Grigalunas and Opaluch 1993; Carson et al. 2003) and the effects of spills on the cohesion of local social networks (Omohundro 1982). Oil extraction and pollution by multinational companies in Nigeria and Ecuador has been the subject of major political conflicts and litigation lasting decades (Frynas 2000; Keefe 2012). But no oil spill before the 2010 BP disaster generated popular attention, legal ramifications, or scientific scrutiny akin to the 1989 *Exxon Valdez* tanker accident in Prince William Sound and the Gulf of Alaska

The development of Alaska's North Slope oilfields and the construction of the Trans-Alaska Pipeline brought large-scale marine transportation of crude oil to Alaska's coastal waters in the 1970s. From the Alyeska pipeline consortium's terminal at Port Valdez, tankers routinely navigated Prince William Sound *en route* to West Coast refineries. Before dawn on March 24, 1989, one of those tankers, the *Exxon Valdez*, ran aground on rocky Bligh Reef in the Sound,

breaching its hull and beginning to pour at least 10.8 million gallons of heavy crude (Ott 2005:4-7) into the sea. Before it was over, the spill had spread for 470 miles fouling shores in the Sound and along the Kenai and Alaskan Peninsulas (Ott 2005: xx; National Response Team 1989: 1, 26; Liszka 2010: 2).

In the chaotic early days of the spill response, the involved companies did not have all the equipment called for in their contingency plans to respond to a large spill. Equipment, personnel and vessels were frantically gathered, and the remaining oil onboard *Valdez* was transferred to other vessels. Within three weeks, almost 2,000 Exxon personnel, 500 federal workers, and thousands of contracted workers were responding in Alaska alongside about 1,000 boats (National Response Team 1989: 6-16; Picou et al. 1997; Exxon Valdez Trustee Council 2012). At the peak of this effort, more than 2,000 boats and 9,400 workers participated in the spill response and cleanup (Rodin et al. 1997: 196). The spill closed the herring season for commercial fishermen in the Sound. Many fishermen went to work in the cleanup, which some locals dubbed the “Money Spill” for the high wages paid by Exxon, while others criticized their neighbors for taking money from the spiller (Ott 2008: 49-55). Cleanup efforts included chemical dispersants and fertilizers sprayed from boats and the air, *in-situ* burns, booming and skimming operations, and shoreline cleaning. Shoreline cleaning often used high-pressure jets of hot water, a technique later criticized for its harmful environmental consequences (National Response Team 1989: 17-21; Alaska Department of Environmental Conservation 1993).

During the summer of 1989—the salmon fishing season—fisheries reopened in parts of the Sound but were temporarily closed again after several fishermen’s nets came up fouled with crude. Following months of disagreements over the use of dispersant, fertilizer, and pressurized hot water, shoreline cleanup was scaled back in September 1989 but, in some places, the cleanup and associated controversy continued through the early 1990s (Ott 2008: 54; Alaska Department of Environmental Conservation 1993), by which time Exxon had spent more than \$2 billion on the response. The cleanup was associated with the doubling of non-fishing earnings in southcentral Alaska for a few months following the spill (Cohen 1993), and with general social disruption as measured by a surge in demand for local government services, law enforcement calls, and psychological counseling (Rodin et al. 1997).

In southcentral Alaska, 1989 commercial fishing revenues were down nearly 50% under expected estimates, in 1990 around 20% below forecasts (Cohen 1999). In 1990 and 1991, good landings of salmon and herring were widely reported by Exxon as evidence of post-spill recovery, but the 1992 collapse of pink salmon landings in Prince William Sound and the 1993 collapse of the Sound’s pink salmon and herring fisheries led to new demands for compensation and scientific investigation by local commercial fishermen, demands fishermen presented dramatically on August 20, 1993, through a blockade of the Sound using their vessels (Ott 2005: 275). Since the mid-1990s, salmon landings have recovered to pre-spill averages; salmon fisheries are defined by the *Exxon Valdez* Trustees as Recovered. The herring fishery, however, has never returned to its former productivity, and that fishery is defined by the Trustees as Not Recovering, with some recent research indicating the beginning of the herring collapse evident in 1993 coincided with the 1989 spill (*Exxon Valdez* Oil Spill Trustee Council 2010; Harwell and Gentile 2006; Thorne and Thomas 2008).

In an assessment of economic damages to tourism, the McDowell Group (1990) estimated 1989 losses to southcentral and southwest Alaska businesses at \$19 million, with smaller but continuing effects on tourism in 1990. A report on the recreational fishing sector (Carson and Hanemann 1992) found significant losses in 1989 and 1990 in southcentral Alaska totaling \$31 million.

In the years after the *Valdez* spill, the legal drama of civil and criminal charges, multiple trials, appeals, payments and denials became a principal socioeconomic effect of the disaster (Picou et al. 2004). Through 1990, the State of Alaska fought with the federal government and Exxon over the details of a settlement agreement that the State argued harmed its rights and those of private claimants. In early 1991, Alaska and the U.S. government announced a settlement for civil and criminal penalties, with Exxon paying \$900 million for natural resources damages over 10 years and a criminal fine of \$150 million; \$125 million of the criminal fine was forgiven by the court and \$100 million of the forgiven amount was transferred as criminal restitution to Alaska and the U.S. treasury, for a total of \$1.025 billion in civil and criminal penalties (Piper 1999). The settlement, approved by the federal judge in December 1991, set up the Exxon Valdez Oil Spill Trustees and a timetable for restoration activities funded through the settlement.

The 1991 settlement only affected natural resources damages to publically owned resources, not the claims of private parties. Exxon's claims process for commercial fishermen and others paid out \$303 million between 1989 and 1994 (Perry 2011: 457), but many of those who thought they had not been compensated sufficiently, were denied compensation, or whose claims were outside Exxon's categories of compensable damages sought redress in court. By 1992, 200+ lawsuits had been filed by dozens of law firms representing many thousands of private claimants seeking compensation for a variety of economic damages (Goldberg 1994). In 1991, Exxon began removing private claims against it from state to federal court, and had moved most cases to that venue by the time the first consolidated class action came to trial in November 1991. Using the precedent of *Robins Dry Dock*, Judge H. Russel Holland dismissed several potential classes from the consolidated lawsuit against Exxon, including seafood processors, cargo shippers, and tourism businesses (Perry 2011: 458). Commercial fishermen were also denied recovery for losses related to the value of their vessels and fishing permits, and Native Alaskans among others were denied for non-economic damages to lifestyle, culture, and lost passive use of natural resources (Hirsch 1999: 273-4; Jenkins and Kastner 1999; Jorgensen 1995; Panoff 1998; Carson et al. 2003). In 1993, attorneys for plaintiffs in the various class actions organized into a unified body and the Trans-Alaska pipeline's operator, Alyeska, settled outstanding claims separately from Exxon for \$98 million (Hirsch 1999).

The class action trial against Exxon took place from May through September 1994. Phase I addressed the spill itself and Exxon's responsibility. Phase II assessed economic compensatory damages, and while the jury awarded \$287 million to plaintiffs, it rejected several categories of claims, including \$600 million in claimed losses to the market price of fish (Hirsch 1999: 284-5). Phase III addressed punitive damages, the jury hitting Exxon with a \$5 billion punitive assessment that would be appealed all the way to the U.S. Supreme Court in 2008, 14 years after its awarding. Over this time, the award would be reduced to \$4.5 billion, then to \$2.5 billion, then, eventually, to the \$507.5 million awarded by the Supreme Court on June 25, 2008. The Court's logic in finding for this award was based on a contemporary assessment of total economic losses due to the *Exxon Valdez* spill, paying punitive damages at a 1:1 ratio with economic losses (Perry 2011: 464; Liszka 2010). Phase IV claims, including personal injury cases, some Alaska Natives, and commercial fishermen not covered in Phase II, were settled before going to trial for just \$3.5 million. Following motions by Exxon's lawyers to offset damage awards against it, the Phase II payment shrank to just \$20 million in 1995 and Phase IV payments disappeared entirely (Hirsch 1999: 287).

Longer-term social science assessments of the 1989 Alaska oil spill (Picou et al. 2009) show cultural changes related to the loss of traditional natural resource harvesting activities (Dyer 1993), several years of depressed subsistence food harvests among Native Alaskans concerned about oil contamination (Field et al. 1999), and high levels of chronic stress among local residents facing an uncertain future (Palinkas et al. 1993; Gill and Picou 1998), especially among those involved in long-term litigation through the 1990s and 2000s (Picou et al. 2004; Gill 2008; Picou 2009b). The impacts of the spill on indigenous Alaskan culture became a particularly contentious point among social scientists as they were recruited into litigation over native cultural damages claims (Jorgensen 1995). Arguments that the spill had greatly harmed Alaskan Native subsistence culture (Stephen Braund & Associates 1993) were set against arguments that Native culture was already devastated by centuries of colonialism, was resilient and constantly changing, and the effects of the spill were relatively minor in historical context (Wooley 1995). Native Alaskans' cultural damages claims were dismissed in the 1994 trial which awarded \$20 million to compensate for the economic value of subsistence foods lost but nothing specifically for cultural losses that Judge Holland ruled were inadmissible (Jorgensen 1995: 93; Panoff 1998). The secondary socioeconomic harms from lingering uncertainty and litigation stress following the Valdez spill led some social scientists to pursue applied research on coping mechanisms and cultural change, therapy, and alternative dispute resolution mechanisms like mediation (Picou 2000, 2009a, 2009b; Marshall et al. 2004; Gill et al. 2010).

3.4. LEGAL AND REGULATORY FRAMEWORK FOR RESPONDING TO OIL SPILLS

Brian Marks, Diane Austin, and Bethany Rogers

The development of coastal and offshore oilfields in south Louisiana in the 1930s and 1940s brought chronic oil releases from production and transportation. Oil spills and production-related discharges were frequent in the coastal zone in these early years (Sell and McGuire 2008) and it was not long before legal remedies were sought. For example, a serious decline in oyster populations coinciding with the expansion of coastal oil activity in the 1930s and 1940s led oyster harvesters to file multiple claims totaling nearly \$40 million in damages against oil companies in Louisiana courts, alleging that produced water, a byproduct of petroleum

production, was killing the oysters. Following a legal victory for the oystermen in the Louisiana Supreme Court (*Doucet v. Texas Company et al.* 1944; Kuriloff 2005), a consortium of oil companies, Gulf Oil Corporation, Louisiana Wildlife and Fisheries Commission, and Freeport Sulphur Company each funded research programs that, in the end, concluded a new parasite and not oil or produced water was the cause of oyster mortality, causing the lawsuits to be dropped or settled for a small fraction of claimed damages (Schlesselman 1955; Ray 1996). Several large, more visible spills, however, such as those discussed in the previous section, led the federal government to establish a legal and regulatory framework for responding to oil spills.

3.4.1. The National Environmental Policy Act (NEPA)

In response to highly visible environmental disasters, including the Santa Barbara oil spill, the 1969 passage of the National Environmental Policy Act (NEPA) ushered in an era of U.S. federal regulation aimed at protecting the environment. Through NEPA, Congress directed all federal agencies to prepare, for any federal lands action deemed to have potentially significant environmental impacts, a detailed Environmental Impact Statement (EIS) of the adverse environmental effects of any proposed action, alternatives to that action, the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity, and irreversible and irretrievable commitments of resources involved in the implementation of the proposed action. The EIS also documents the impacts of federal agency actions on socioeconomic conditions and cultural resources. In 1978, the President's Council on Environmental Quality (CEQ), established under NEPA to oversee federal implementation of the environmental assessment process, promulgated regulations interpreting the procedural provisions of NEPA.

The purpose of NEPA, as described in the regulations, is "not to generate paperwork—even excellent paperwork—but to foster excellent action" [40 CFR 1500.1(c)]. Nevertheless, the Act's deceptively simple language has led to thousands of lawsuits and administrative decisions seeking to clarify its intent. The evolution of the EIS and the associated Social Impact Assessment (SIA) has followed a particular trajectory, due in part to its close ties to concerns about energy development, and that legacy continues to shape those processes today (Luton and Austin n.d.).

Though offshore development in the Gulf of Mexico began decades before the passage of NEPA, the U.S. federal OCS leasing program expanded in the years afterward as potential petroleum reserves were identified off the coasts of south and central California, Alaska, and the north Atlantic. Consequently, under OCSLA, the Department of Interior initiated an environmental studies program (ESP) to "establish information needed for prediction, assessment, and management of impacts on the OCS and the nearshore area which may be affected" [43 CFR 3001.7]. When it was established, the MMS inherited the ESP and was given the responsibility for producing NEPA documents for all aspects of offshore energy development, beginning with an overarching Five-Year Leasing Program EIS and continuing through additional documents for energy lease sales, exploration, development, and production plan, (Bureau of Ocean Energy Management n.d.).

BP's development of the Macondo Well was governed by two levels of NEPA documents. According to Nancy Sutley, Chair of the CEQ, in her August 25, 2010 testimony before the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling:

[I]n April 2007, MMS prepared a broad “programmatic” EIS on the Outer Continental Shelf Oil and Gas Leasing Program, which includes the five-year lease plan for 2007-2012. Also, in April 2007, MMS prepared an EIS for the Gulf of Mexico OCS Oil and Gas Lease Sales in the Western and Central Planning Areas, the Multi-Sale; EIS. In October 2007, MMS completed another NEPA analysis, an Environmental Assessment (EA), tiered off the Multi-Sale EIS, for Central Gulf of Mexico Lease Sale 206. This is the sale in which the lease was issued for the location that includes the Macondo exploration well. After the lease was issued, BP submitted an initial Exploration Plan and a revised Exploration Plan for the proposed Macondo well in the Mississippi Canyon Block 252 of the Gulf of Mexico. MMS approved BP's Exploration Plan following two Categorical Exclusion Reviews completed in April 2009. MMS approved BP's drilling permit applications under a Categorical Exclusion. Our report concluded that while MMS conducted numerous levels of extensive environmental reviews, its NEPA process could be improved in some areas (Sutley 2010).

Following the CEQ's review of the MMS procedures and recommendations, the reconfigured BOEM “committed to developing a new approach to NEPA compliance to improve the agency's decision-making process and provide useful, transparent information to the public about environmental impacts” (Sutley 2010). Beyond NEPA, several laws specifically address response to oil spills.

3.4.2. The Oil Pollution Act of 1990 (OPA 90) and Natural Resource Damage Assessment (NRDA)

Federal oil pollution laws in the United States date to the Rivers and Harbors Act of 1899, also known as the Refuse Act, and the 1924 passage of the first Oil Pollution Act. The former legislation established federal authority to regulate the dumping of solid waste, but not liquids like oil, into navigable waterways and set penalties for intentional dumping into those waterways, while the latter applied those sanctions against the intentional, but not accidental, dumping of oil from vessels (but not shore facilities) into navigable waters (Kovarik 2012; Kurtz 2004: 205; Martin 2011: 963). The 1924 law was only slightly modified by the 1961 Oil Pollution Act which ratified the 1954 international Convention for the Prevention of Pollution of the Sea by Oil to prevent ships from discharging oil into the coastal waters of foreign countries and by the Clean Water Restoration Act of 1966 which added civil law provisions against oil polluters to existing criminal law (Martin 2011: 963). The 1967 spill from the oil tanker *Torrey Canyon* off the coast of England spurred the United States to develop its National Oil and Hazardous Substances Pollution Contingency Plan (National Contingency Plan) to govern national response to oil spills and hazardous substance releases and promote overall coordination among responders. The Plan establishes a National Response Team, Regional Response Teams, and an On-Scene Coordinator to direct all federal, state, and private response activities.

Passed in the wake of the 1969 Santa Barbara oil spill, the Water Quality Improvement Act (WQIA) of 1970 (Murchison 2011: 919-20) repealed the 1924 Oil Pollution Act, set new civil and criminal penalties for oil spills, assigned limited financial liability for cleanup costs to owners and operators, exempted those limits where willful negligence could be demonstrated,

required the reporting of spills by responsible parties, and established federal planning and authority for cleanup activities. The WQIA was superseded by the 1972 Federal Water Pollution Control Act and 1977 Clean Water Act (CWA), laws that better defined what constituted an oil spill and revised civil and criminal penalties.

Other federal laws bearing centrally on oil pollution are the 1978 amendments to OCSLA and the 1980 Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The OCSLA amendments applied a strict liability regime for offshore facility owners and operators similar to that already existing for vessels (the 1970 WQIA first distinguished between vessels, offshore facilities, and shore facilities in oil spill liability) and set up a fund for offshore rig oil spill cleanup and damages costs (Martin 2011: 966; Murchison 2011: 922-5). CERCLA outlined the framework of Natural Resource Damage Assessment (NRDA), a process for assessing damages to and seeking compensation for the public for injuries to natural resources³ (Kurtz 2004: 205-6). The NRDA also defines efforts to restore, rehabilitate, replace or acquire natural resources equivalent to those harmed.

Provisions of the CWA governing oil spill liability, response, damage assessment, and compensation were amended by the Oil Pollution Act of 1990, commonly referred to as OPA 90. The massive scale of the 1989 *Exxon Valdez* spill and the media attention it garnered drove Congress to overhaul oil spill legislation, especially after a series of additional spills in the summer of 1989 heightened public concern about oil pollution nationwide, not just in Alaska (Sump 2011: 1106-9). The inadequacy of existing law to respond to or compensate affected parties in the *Exxon Valdez* affair shaped the construction of OPA 90 (Sump 2011). Among its provisions, the act barred vessels that had spilled more than one million gallons of oil anywhere from entering Prince William Sound, the site of the disaster (Murchison 2011: 926); mandated the eventual adoption of double-hulled tankers for oil transport (Kim 2007); expanded the scope of oil spill liability; defined who responsible parties were and their responsibilities during and after spill events; framed federal, state, and tribal government roles in spill response and damage assessment; and spelled out the kinds of cleanup costs and recoverable economic damages public and private claimants could seek from responsible parties (EPA 2012a; EPA 2012b; Davis 2011; Allen 2011; Sump 2011; Murchison 2011; Martin 2011; Kurtz 2004; Kiern 2000, 2011). Both CERCLA and OPA 90 assign general responsibility for investigating and responding to contamination by hazardous substances or oil to the U.S. Coast Guard and the U.S. Environmental Protection Agency (EPA).

Under OPA 90, entities from which an oil discharge could reasonably be expected to cause “substantial harm” to the environment from a discharge to navigable waters of the United States or the adjoining shoreline have to produce Vessel and Facility Response Plans demonstrating their ability to respond to “worst-case” discharges and access necessary equipment for that response. Federal and local governments are required to develop Area Contingency Plans to deal with potential spills (Sump 2011: 1117-8; EPA 2012a, 2012b). On the basis of the National Contingency Plan (NCP) and Area Contingency Plans, OPA 90 directs the Federal government to take charge of responding to spills beyond the scope of local and state agencies alone. On-Scene Coordinators drawn from the U.S. Coast Guard and EPA direct spill response and, in a major spill designated a Spill of National Significance, are coordinated by an overall National Incident Commander. On-Scene Coordinators and the National Incident Commander work with the potentially responsible parties and local, state, and federal agencies

³ Both CERCLA and OPA define “natural resources” to include land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other resources.

through a Unified Command, or in spills federalized by executive order, act directly to stop and clean up the spill (OPA 90, Section 4201).

OPA 90 amended the Clean Water Act to set civil penalties for discharging oil at \$25,000 per day per incident plus \$1,000 per barrel, \$4,300 per barrel if the responsible party is found guilty of “gross negligence” (Martin 2011: 961-967). Apart from these costs, the law limited the liability of responsible parties to the entire cost of removing the oil plus a varying amount depending on the size of the vessel or, in the case of offshore rigs, \$75 million (Murchison 2011: 931). OPA 90 also created an Oil Spill Liability Trust Fund (OSLTF), consolidating existing smaller public oil spill funds and paying for it with a five-cent per barrel tax on oil. The OSLTF can spend up to \$1 billion on any particular oil spill to pay for cleanup costs, cover the costs of performing natural resource damage assessments, and compensate private and public claimants for losses (Sump 2011: 1109-12). OPA 90 acknowledges three kinds of damages for which private claimants can seek compensation: damage to real or personal property; loss of subsistence use of natural resources; and the loss of profits and earning capacity. Governments can seek compensation under OPA 90 for the loss of government revenues and the increased cost of public services, and natural resource trustees—delegates from federal, state, and tribal governments who have management responsibility for the resources - can pursue compensation for damage to natural resources through the NRDA process (U.S. Coast Guard 2012; Davis 2011: 20; Murchison 2011: 929; Allen 2011).

The NRDA process proceeds in three major phases: pre-assessment; injury assessment and restoration planning; and restoration (see Table 2.1). To meet their responsibilities for restoring natural resources, trustees can: sue in court to obtain compensation for damages and the costs of assessment and restoration planning from the potentially responsible parties (PRPs); conduct assessments and restoration actions in accordance with standards specified by the Federal government and file a claim for reimbursement from the OSLTF; or participate in negotiations with PRPs to obtain PRP-financed or PRP-conducted assessments and restorations of natural resource damages. “Restoration actions are principally designed to return injured resources to baseline conditions, but may also compensate the public for the interim loss of injured resources from the onset of injury until baseline conditions are re-established” (EPA n.d.).

Table 2.1. Phases in The NRDA Process

Phase	Action	Outcome
Pre-Assessment	Trustees determine whether the incident of concern has caused, or is likely to cause, injury to natural resources,.	If yes, process moves to second phase.
Injury Assessment and Restoration Planning	Trustees assess specific types of impacts and develop plans for likely restoration projects.	Plans for restoration projects.
Restoration	Restoration projects are selected and implemented.	Implementation of restoration projects.

OPA requires claimants to present their claims to the PRP or its designee for compensation before they may seek funds from the OSLTF or pursue litigation (Kiern 2000, 2011: 36-8). The 1996 amendments to OPA 90 require responsible parties to offer interim, short-term damages payments to claimants and pay interest on claims more than a month old. The

amendments also tweak some aspects of the operation of the OSLTF (Kiern 2011: 36-8; Murchison 2011: 933-6). Further federal legislation in 2002, 2004, 2005, 2006, 2008, and 2010 increased the Coast Guard's ability to access OSLTF funds during emergencies, refined liability rules for lenders to vessel and facility operators, attempted to improve the speed of compensation to commercial fishermen by offering loans through the OSLTF to affected harvesters, raised the cap on the OSLTF's reserves, and increased the rate of tax replenishing the Fund, among other provisions (Kiern 2011: 14-25).

Following the passage of the OPA 90 but before the *Deepwater Horizon* spill, U.S. government officials reported that the number and volume of oil spills fell considerably in American waters, despite increasing volumes of oil produced and transported offshore (Kiern 2011: 7-9). However, OPA 90 was criticized before the 2010 Gulf of Mexico disaster because its mandate to convert from single-hull to double-hull oil tankers paradoxically encouraged more use of single-hulled vessels in U.S. waters (Kim 2007), because its limited liability provisions would readily exceed both operators' limits and the OSLTF in the event of major spills (Kim 2010), and because of weaknesses in industry and government spill preparedness and response (Kurtz 2008) and damage compensation procedures (Kiern 2011) in post-OPA 90 spills.

The *Deepwater Horizon* spill was reported to the National Response Center, the sole federal point of contact for reporting all hazardous substances and oil spills, and NRDA teams were mobilized to begin pre-assessment. At the end of September 2010, the NRDA process moved to its second phase, and on April 21, 2011, the trustees entered into an agreement for early restoration (Deepwater Horizon Natural Resource Trustees 2011). The framework agreement stipulates that each candidate project must be negotiated with BP and an agreement reached on cost and natural resource damage offsets before any activities may proceed. A Draft Phase I Early Restoration Plan and Environmental Assessment was released in mid-December 2011 for public comment. BP and the other responsible parties can either execute this plan or provide the trustees with funding to implement the plan.

3.4.3. National Historic Preservation Act

The National Historic Preservation Act was passed in 1966, and amended in 1980 and 1992, to preserve historical and archaeological properties and cultural resources in the United States. In addition to the obvious historical and archaeological properties governed by the Act, one cultural resource category, Traditional Cultural Properties (TCPs), was developed by the National Park Service to identify land features or modest architectural sites that have minimal, if any, evidence of human occupation or use but that sustain the historic or cultural identity of communities (Parker and King 1998). The Act requires federal agencies to evaluate the impact of all federal actions and decisions on these properties and resources through the *Section 106* process. The 1992 amendments to the Act explicitly direct federal agencies to contact and consult with federally recognized Indian tribes in preservation-related activities and to maintain confidentiality in those proceedings. The Act, and others such as the Native American Graves Protection and Repatriation Act (NAGPRA), apply the concept of cultural affiliation, a relationship of shared group identity which can be reasonably traced historically or prehistorically between a present day Indian Tribe and an identifiable earlier group, as the basis upon which tribes establish their authority to participate in decisions about non-reservation resources and remains. Since the early 1990s, tribes and those who work with them have moved beyond the narrow boundaries of an archaeological or historic preservation framework to incorporate the broader conception of cultural landscapes as a mechanism for capturing tribal perspectives on land and resources (e.g., Zedeño, Austin, and Stoffle 1998).

Section 106 of the Act requires that all sites located within a project area, both architectural and archeological, must be assessed before any federally-funded development project or undertaking is carried out, according to the eligibility criteria of the National Register of Historic Places. If, through Section 106 review, a site is determined to be eligible for nomination to the National Register, developers, which include federal agencies, are directed to attempt to “avoid, minimize, or mitigate” any “possible adverse effects” on the historic resource under consideration (King 2003). A 1997 programmatic agreement between the National Park Service, the Advisory Council on Historic Preservation (ACHP), and other federal agencies laid out Section 106 compliance exceptions for oil spills and hazardous substances releases under the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

Because the *Deepwater Horizon* disaster began on the federal OCS, and in light of the potential damage to historic and cultural resources along the Gulf Coast of both the oil and the cleanup activities following the spill, the Macondo well explosion was considered a federal action and triggered a Section 106 review. The review was administered by the National Park Service, the keeper of the National Register, and the State Historic Preservation Offices of Louisiana, Mississippi, Alabama, and Florida. Though “immediate rescue and salvage operations conducted to preserve life or property” are exempt from Section 106 requirements, the U.S. Coast Guard, home of the National Incident Commander, began developing cultural resources protocols to guide the identification and treatment of historic properties during the cleanup. The Section 106 review was underway by summer 2010 to identify regional historic resources that were damaged or left vulnerable by the release of oil or intensive cleanup operations (ACHP 2010; see NCPTT 2010 for publicly available maps of cultural resources in the potentially affected area).

The Section 106 review was led by a team of archeologists who generated an inventory of archeological resources, both previously recorded and newly identified archeological sites

(Austin Field notes May 30, 2011). Much of the land onto which the oil could potentially have flowed was under private ownership, and limited archaeological and cultural resource assessments had been completed prior to the spill. The inventory of archaeological resources included remains of former plantation properties, Native American mound burial grounds, and underwater sites, such as submerged historic watercraft. In order to mitigate damages to these sites already listed on or eligible for the National Register, the archeological resources were mapped and their condition was monitored by archeological teams working closely with the USCG to ensure that cleanup operations were not causing unneeded damage to the resources. A Geographic Information System (GIS) database was generated for the project to link reconnaissance and survey reports and archeological monitoring write-ups and was made available to certain participating parties through a collaborative software system.

Along with the archaeologists, a team of anthropologists generated an inventory of TCPs in the coastal communities impacted by the oil spill (Austin Field notes May 30, 2011). Potential TCPs, such as mom and pop seafood shops, sites of fishing piers, and community barrooms, which are significant components of the social and cultural life of Gulf Coast communities, were identified. As part of the review, Native Americans from federally recognized tribes in Oklahoma visited potentially affected sites in areas to which they hold cultural affiliation to share information about the sites and their connection to them. According to the terms of the programmatic agreement governing the cultural resources inventory, the raw data collected during the TCP review will be shared with the Native American tribes, coastal oil and fishing communities, and the State Historic Preservation Officers who participated in the Section 106 review process. Whether and how the architectural and cultural inventory will be shared with the public, and whether any damages to the identified TCPs will be mitigated, had not been determined when this study was being conducted.

3.5. REFERENCES

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CHAPTER FOUR: THE INTERPLAY OF MIGRATION, ETHNICITY, AND SOCIAL NETWORKS ALONG THE GULF COAST

Preetam Prakash, Brian Marks, and Diane Austin

Despite the risks and hazards associated with living along the Gulf of Mexico, its coastal counties and parishes are home to hundreds of thousands of people. The distinctive and highly varied communities that populate the contemporary Gulf Coast are the result of historical patterns of settlement and migration by a multitude of ethnic groups. Over time these groups have changed in their definition of themselves and their relations with others. They are sustained and transformed through webs of social ties, connections, and obligations related to work and livelihoods, religious and civic institutions, ethnic solidarity and racial divisions, extended family and friendships. Migration, ethnicity, and social networks do not act as discrete factors in community continuity and change, however. Rather, they interact dynamically in shaping the direction in which communities develop, reflecting the circumstances of each community within its larger regional and global context.

This section describes processes of migration that continue to shape the population of the Gulf Coast, the changing social status and residential patterns of ethnic groups in the region, and social networks, some of which are interwoven with ethnic identity and migratory flows, linking Gulf residents with common interests and practices across cities and around the world. Following this broad historical description, three prominent ethnic groups along the Gulf Coast—Native Americans, Vietnamese, and Hispanics—are discussed in more detail to illustrate how certain combinations of migratory experience, ethnic identification, and social network participation yield concrete consequences for coastal residents facing natural and technological disasters.

Migration is an expansive concept, but here it refers to international immigration to the United States and inter-regional and intra-regional relocation within the United States. Historical migrations that brought people to the Gulf Coast and shifted where they lived in the region are considered in this section, as are present-day migratory trends. This section also considers temporary labor migration to jobs within the region and outside it.

Ethnic groups can be defined numerous ways. In this report, ethnicity is understood in two: first, in the way that race and ethnicity are recorded by the U.S. Census Bureau in five broad racial/ethnic categories (White, Black or African American, American Indian and Alaska Native, Asian, and Native Hawaiian and Other Pacific Islander), as well as Hispanic or not; and, second, as defined by study participants themselves and recorded by project fieldworkers over the course of the study. The focus in this report is on groups, and attention is paid to both the racial/ethnic composition of Gulf Coast communities over time and to how group self-identification and others' descriptions of those groups have changed.

Social networks can be defined as a set of units, whether individuals or groups, that are united by a certain pattern, or patterns of interaction (Scott 2000). Social networks exist in every community and can be founded on any kind of interaction between people. This study considers social networks around the following relationships in Gulf Coast communities: employment and livelihood, family and friendship, religious and civic membership, and ethnic/racial identification.

A comprehensive assessment of migration, ethnicity, and social networks along the Gulf Coast is beyond the scope of this section and, indeed, would require its own dedicated volume. Rather, this section incorporates examples to give the reader an understanding of how these

factors in community life shape the conditions in which Gulf Coast residents live and the options available to them in responding to major events like the *Deepwater Horizon* oil spill and its aftermath.

4.1. MIGRATION

Preetam Prakash and Brian Marks

4.1.1. International Immigration

The era of French and Spanish colonialism in the 18th century saw the first significant international immigration into the Gulf Coast, principally from Europe and Africa, as colonies were established along the Gulf of Mexico and in the Lower Mississippi Valley (Powell 2012). The Trans-Atlantic slave trade forcibly brought many thousands of Africans from Senegambia, Angola, the Congo, and elsewhere to the region where they were crucial in the clearing of land, construction of infrastructure, feeding of the population, and production of exportable goods (Hall 1992; 2005). French and Spanish colonists and recruited German farmers (Yoes 2005), established Biloxi, Mobile, New Orleans and other towns. Other Europeans, too, came to the region, especially those recruited in the late 18th century by the Spanish Empire to cement its tenuous hold on the Gulf. Many Acadian refugees who were scattered around the Atlantic World following their expulsion from Atlantic Canada in 1755–1763 reunited in Louisiana between 1765 and 1785 to settle along the Mississippi, down Bayou Lafourche, and to the west of the Atchafalaya Basin. Collectively they came to be known as Cajuns (Brasseaux 1987). Canary islanders came to Louisiana in these decades, later becoming known in Saint Bernard Parish as Isleños (Din 1988; Perez 2011).

In the 19th and early 20th centuries, the Ports of New Orleans and Mobile brought tens of thousands more international immigrants to the Gulf Coast. Irish, Germans, Sicilians, Croatians, French, English, Chinese, Filipinos, and others came, finding employment dredging canals, building towns, farming, fishing, logging, operating boats and stevedoring on the docks (Campanella 2008: 167-92; Davis 2010; Boudreaux 2011; Durrenberger 1992; Vujnovich 1974). Some of these groups, like the Croatians, Chinese, Filipinos and Italians, settled along the Gulf Coast and took up oystering and fishing in lower Plaquemines and Jefferson parishes (Davis 2010: 325-55; Espina 1988). Today, people with Italian and Croatian surnames remain prominent in the commercial seafood industry of those parishes.

Among the most significant waves of international immigrants to the Gulf Coast in the late 20th century are the Southeast Asian refugees who arrived following the end of the Vietnam War (Starr 1981; Airress and Clawson 1991; Arden 1981; Bounds 2011; Durrenberger 1996: 47-68; Nash 1992; Ward and Gussow 1979; Juhasz 2011: 150-60). Vietnamese, Cambodians, and Laotians were settled in the region by government and religious institutions in the late 1970s and early 1980s and subsequently took their place in some of the Gulf Coast's prominent industries. For example, a sizeable Lao community in New Iberia, Louisiana works primarily as welders and in other shipbuilding and fabrication occupations tied to the offshore oil industry, as does a Vietnamese enclave in Amelia, just west of Houma (Austin and McGuire 2002; Marks Field notes, 2011). Cambodian, Lao, and Vietnamese ethnic communities grew up across the region in the 1980s and 1990s, adding to the ethnic mix of commercial fishing settlements like Bayou la Batre, Alabama, Biloxi, Mississippi, and Buras, Louisiana where Southeast Asian immigrants

and their children now own and operate many commercial fishing vessels and work in seafood processing plants.

Though Hispanic immigration to the central Gulf Coast dates back decades, during the 1990s and 2000s, and especially following the devastating hurricanes of 2005 and 2008, Hispanic immigrants from Mexico and Central America arrived along the Gulf Coast in significant numbers, working in the shipyard sector, seafood processing, and the post-hurricane reconstruction boom, and establishing a new presence the region's commercial landscape. Hispanic grocery stores, *taquerias*, and Spanish-language service providers appeared in strip malls alongside the Asian groceries, *phở* restaurants, and Vietnamese travel agencies that had been established a generation before.

4.1.2. Inter-regional Migration

Alongside international flows of migrants to the Gulf Coast, many current residents can trace their ancestry back to migrants who came from other parts of the United States. For example, European expansion pushed the members of some Native American groups south into the bayou country of south Louisiana. Following the incorporation of the Gulf Coast states into the United States in the early 19th century, white Americans with English, Irish, and Scottish ancestry flooded into the region, as did a great many African-Americans who came through the internal slave trade from Upper South states to the expanding cotton and sugar frontier of the Deep South (Becnel 1989; Rothman 2005). In these same decades, major forced migrations of Native Americans out of the southeast to Oklahoma were perpetrated by the U.S. and state governments, leading some to seek and find refuge in the coastal wetlands.

The Gulf Coast, whose environment was generally not suitable for cotton plantations, experienced these broad processes differently than the northern parts of Alabama, Mississippi, and Louisiana. For example, the settlement of Anglo whites and enslaved African-Americans to establish plantations was not as rapid or pronounced in coastal Mississippi and Alabama. In the coastal parishes of Louisiana, on the limited areas of high ground where agriculture was possible, sugar rather than cotton was the cash crop, and the region attracted major investments in land reclamation, slaves, and sugar mills by out-of-state as well as local planters (Follett 2005).

After the Civil War and the near-collapse of the plantation economy, the Gulf Coast drew new interest from outside industrial interests seeking to develop land and to extract valuable natural resources. The harvest of cypress and pine from vast swathes of the coast quickly propped up new company sawmill towns and attracted migrant laborers from distant regions (Hahn and Schwab 1998). Most lumber towns disappeared just as quickly as the timber was exhausted, but some of the workers stayed. Railroads and canals also cut through the region, making land available to farmers from the Midwest, who created new settlements with names like Iowa, Louisiana (Post 1962; Davis 2010: 71-97). The development of seafood canneries and railway connections led to the expansion of commercial fisheries, attracting new migrants who found work hauling nets and shucking oysters. Immigrants from Central Europe and the Balkans, termed "Slavonians" and "Bohemians" at the time, moved from Baltimore to Biloxi and coastal Alabama in the late 19th century. Many followed the oyster trade with which they had become familiar in the Adriatic or Chesapeake Bay (Boudreaux 2011; Durrenberger 1992).

As noted above, perhaps the most momentous historical event affecting inter-regional migration to the Gulf Coast was the discovery and exploitation of oil and gas in the region after

1901 and the subsequent expansion of the industry to ever-deeper waters after 1938. The work opportunities available in drilling the wells; constructing vessels, facilities and refineries; fabricating parts; and laying pipelines drew to the Coast laborers from across the South. Initially, this included men from Texas, Oklahoma, and north Louisiana with experience working in established oilfields in those places (McGuire 2008; Sell and McGuire 2008; Davis 2010: 407-59). Following each new oil discovery, new waves of laborers descended on the region, often provoking cultural frictions between newcomers and natives, contributing to cultural change in the broader community, and, over time, altering the community's demographics as some workers settled permanently (see Chapter 8, this volume).

As in other parts of the South, the mid-20th century also saw a major out-migration from the Gulf Coast to the North and western United States. In this Second Great Migration, millions of southern African-Americans sought to access new industrial employment, better educational and housing opportunities and an escape from the overt racism and violence directed against them (Wilkerson 2010; Wall et al. 1997: 305, 321). It occurred in the same decades that the oil boom was drawing white workers to Gulf Coast communities. Discrimination in oilfield employment, as well as the steady decline in agricultural employment resulting from consolidation and mechanization in the plantation and sharecropping economy, also contributed to the out-migration of African-Americans from the Gulf Coast (Redher 1999; Wiegmann 1969; Hill 2004). The migration of Gulf Coast African-Americans is still evident today as in the thriving zydeco music scene in California's Bay Area, where many Louisianans migrated to work in shipbuilding and manufacturing in the 1940s (DeWitt 2008).

The Gulf Coast's oil boom, after surging with rising prices during the 1970s oil shocks, crashed in the mid-1980s following a glut of oil on the world market and steeply falling prices. Instead of drawing workers from the surrounding region as they had for a half-century, coastal communities facing high unemployment began losing residents (Pulsipher 2008). The Gulf Coast economic diaspora resulted in significant populations of Cajuns in southern cities such as Atlanta, Georgia, where Cajun clubs and music became established (Bernard 2003: 124). Hurricane Katrina in 2005 generated another wave of inter-regional migration as some displaced Gulf Coast residents were bussed and flown to cities around the country for temporary shelter and as others sought refuge with family and friends in distant states (Lewan 2005; Applebome and Blumenthal 2005).

4.1.3. Intra-regional Migration

Within the Gulf Coast region, communities have repeatedly relocated due to natural hazards, displacement by political and economic forces, and the attractions of better employment and improved livelihoods. Contrasting the experience of many southeast U.S. Native American tribes that were forcibly relocated from the region, many south Louisianan Native people remained in the region but moved, or were pushed, ever-southward towards the Gulf onto narrow and low-lying bayous on the physical and social margins of the region. Smallholding Cajun farmers experienced a somewhat less traumatic displacement from their initial settlements along the Mississippi and upper Bayou Lafourche. They were bought out by large plantation owners and moved out onto thinner ridges along smaller bayous in lower Lafourche and Terrebonne parishes; their communities remain today, though their residents are now primarily involved in oilfield work and commercial fisheries (Brasseaux 1992: 3-19).

Hurricanes, too, spurred movement. For example, after the 1893 and 1915 hurricanes the surviving residents of Cheniere Caminadaville, Louisiana, near Grand Isle, moved north and established new towns, remaining tied to the Gulf through fishing and oilfield work (Rogers 2003; Davis 2010: 257-272; see Chapter 8, this volume). Other major hurricanes, such as Betsy in 1965 and Camille in 1969, did enormous damage to places like Biloxi and Saint Bernard Parish, but residents did not abandon their communities there. Many who were displaced were attracted to return by good economic conditions and by the same social ties which facilitated community rebuilding (Boudreaux 2011: 91-99; Perez 2011).

Other forces acting on Gulf Coast populations were the draw of rural residents to urban areas and the selective labor recruitment of members of particular ethnic enclaves. Throughout the 20th century, as in much of rural America, the countryside of the Gulf Coast experienced out-migration to nearby towns and cities which had better facilities, more work, and what some perceived to be a higher quality of life (Kniffen and Hilliard 1988: 195). Shipyards, ports, chemical plants, and the growing beach tourism industry drew rural Mississippians and Alabamians to Biloxi, Pascagoula, and Mobile; south Louisianans moved from prairie and bayou communities to larger towns and cities for oilfield-related and other work. Rural African-American settlements in south Louisiana shrank with the dismantling of nearby sugar plantations and agricultural mechanization. Today, for example, in Terrebonne Parish, home to many former sugar operations, some rural black communities remain in place, while others, abandoned by their residents, are marked only by churches and the graveyards of their ancestors still maintained by congregants who now live in Houma or outside the parish (Marks Field notes, 2011).

As members of some ethnic groups left coastal communities following the decline of economic sectors, others were drawn in by labor demands. Most notable in this regard was the recruitment of Southeast Asian immigrants from regional cities to seafood processing plants in rural coastal communities in Louisiana, Mississippi, and Alabama. These recruits lessened plant owners' recurrent dilemma of finding enough available labor to do the repetitive, uncomfortable, low-paid and long-hours work (Durrenberger 1996; Moberg and Thomas 1993; see Section 4.5, this volume).

A surge of intra-regional migration accompanied the flooding and damage from hurricanes Katrina, Rita, Gustav and Ike in 2005 and 2008 across the affected parishes and counties of the Gulf Coast. In coastal Mississippi and Alabama, residents rebuilt further away from the beachfront, often in neighboring towns inland, and commercial businesses serving them often followed. In Saint Bernard, Plaquemines, Jefferson, Lafourche, and Terrebonne parishes in Louisiana, coastal communities lost population, too, as people moved further north and to higher ground, with many of those remaining elevating their houses above the flood line or living in mobile homes (Marks Field notes 2011; Dow 2011; Monroe 2012).

4.2. RACE AND ETHNICITY

Brian Marks

4.2.1. Racial and Ethnic Composition of Coastal Parishes and Counties

The Gulf Coast has a long and complicated history of ethnic settlement, evidenced by the above discussion of migration patterns, and this history has important implications for the ethnic makeup of the region's population today. Racial and ethnic relations were in some ways significantly different along the Gulf Coast than in other areas of the Deep South, and the ethnic and racial composition of coastal parishes and counties differs from other regions of their respective states. Table 4.1 displays the racial composition of the populations of the Gulf Coast states of Alabama, Mississippi, and Louisiana with respect to the population of the parishes and counties of Mobile, Harrison, Lafourche, Plaquemines, and Terrebonne, the political subdivisions of concern in this report's community descriptions. The table shows demographic differences between these counties and parishes and changes to their populations over time.

Table 4.1. Demographic Statistics for Selected Gulf Coast States and Counties/Parishes

Area	Total population	% Black	% Asian	% Hispanic	% Native American	% White
Alabama						
2000	4,447,100	26.0	0.7	1.7	0.5	71.1
2010	4,779,736	26.2	1.1	3.9	0.6	68.5
Mobile County:						
2000	399,843	33.4	1.4	1.2	0.7	63.1
2010	412,992	34.6	1.8	2.4	0.9	60.2
Mississippi:						
2000	2,844,658	36.3	0.7	1.4	0.4	61.4
2010	2,967,297	37.0	0.9	2.7	0.5	59.1
Harrison County:						
2000	189,601	21.1	2.6	2.6	0.5	73.2
2010	187,105	22.1	2.8	5.3	0.5	69.7
Louisiana:						
2000	4,468,976	32.5	1.2	2.4	0.6	63.9
2010	4,533,372	32.0	1.5	4.2	0.7	62.6
Lafourche Parish:						
2000	89,974	12.6	0.7	1.4	2.3	82.9
2010	96,318	13.2	0.7	3.8	2.8	79.4
Plaquemines Parish:						
2000	26,757	24.0	2.6	0.6	2.1	69.8
2010	23,042	20.5	3.2	4.6	1.6	70.5
Terrebonne Parish:						
2000	104,503	17.8	0.8	1.6	5.3	73.2
2010	111,860	18.9	1.0	4.0	5.7	70.3

Source: U.S. Census Bureau 2000; 2010

The effect of Hurricane Katrina can be seen in Harrison County and Plaquemines Parish, both hard hit by the storm and both losing population between 2000 and 2010. All other jurisdictions experienced population growth during the decade.

Population demographics vary considerably among these counties and parishes. Lafourche Parish, Louisiana, had the highest percentage of white residents in 2000 and 2010 and the lowest proportion of black residents. Terrebonne Parish had the highest proportion of Native American residents, reflecting the large Native American presence in the bayou communities of the parish. Harrison and Plaquemines had the largest percentage of Asian residents, including many commercial fishers in communities like Biloxi and Buras. Hispanic populations of all counties and parishes increased over the decade, growing especially rapidly in south Louisiana parishes. African Americans made up the largest share of the populations of Mobile and Plaquemines, remaining steady in the former but falling significantly in the latter during the 2000s, in part due to the heavy damage Plaquemines' rural black fishing communities suffered from Katrina (see Chapter 7, this volume).

Ancestry data from the Census, displayed in Table 4.2, reinforces but also complicates the racial categories recorded in the previous table. Residents of Mobile and Harrison counties reported similar ethnic ancestry to their states as a whole, primarily "American" (a category inclusive of un-hyphenated American, African American and Native American as well) and the peoples of the British Isles (i.e., an Anglo American ancestry). The selected south Louisiana parishes are broadly reflective of the state's overall pattern, a marked cultural contrast from Mississippi and Alabama, with French and Italians more prominent than Anglos, but Lafourche, Plaquemines, and Terrebonne residents reported French and French Canadian ancestry in much higher numbers than Louisianans overall.

Table 4.2. Ancestry Statistics for Selected Gulf Coast States and Counties/Parishes

Area	Three most common ancestries first reported by residents, 2009	Three most common countries of birth for foreign-born residents, 2009
Alabama	American (24%), English (9%), Irish (8%)	Mexico (27%), Germany (8%), India (4.9%)
Mobile County	American (19%), English (8%), Irish (7%)	Vietnam (15%), Germany (9%), Mexico (7%)
Mississippi	American (20%), Irish (7%), English (7%)	Mexico (24%), Vietnam (8%), Germany (7%)
Harrison County	American (15%), German (8%), Irish (8%)	Vietnam (24%), Philippines (9%), Mexico (7%)
Louisiana	American (13%), French (12%), Italian (4%)	Vietnam (14%), Honduras (10%), Germany (4%)
Lafourche Parish	French (25%), American (18%), French Canadian (14%)	Mexico (24%), Vietnam (8%), Peru (7%)
Plaquemines Parish	French (21%), American (15%), German (7%)	Vietnam (37%), Cambodia (16%), Other Eastern Europe (7%)
Terrebonne Parish	French (24%), American (16%), French Canadian (11%)	Mexico (19.4%), Vietnam (13.1%), India (7.1%)

Source: U.S. Census Bureau 2009

Country of origin data from foreign-born residents show that the selected Mississippi and Alabama counties had disproportionately more Vietnamese immigrant residents and less Mexican immigrant residents than their states overall, while for the three selected Louisiana coastal parishes, Lafourche and Terrebonne, with their large offshore oil service and shipyard sectors, had more Mexican and Indian immigrants among their foreign born population while Plaquemines, with a different mix of industry and large immigrant fishing communities, had more Southeast Asians and still attracts some European immigrants, namely Croatians.

4.2.2. Race and Ethnicity in Gulf Coast History

In the first centuries of European settlement, the Gulf Coast's varied geography contributed to the uneven development of plantations and slavery across the region and resultant diversity in the racial composition of the population and social relations between residents. While slavery existed everywhere on the Gulf Coast before the Civil War, the unsuitability of the land for cash cropping outside of the alluvial ridges of south Louisiana meant large-scale plantations were not prevalent. Within these marginal spaces in the Deep South marked more by subsistence production and small producers than plantations, race relations in many coastal areas were less strictly defined than elsewhere in the South. While Louisiana was thoroughly embedded in the economics of slavery and the politics of white supremacy in the Antebellum period, the state was a place where free blacks and mixed-race Creoles were numerous and some worked as skilled artisans and owned land (Brasseaux, Fontenot, and Oubre 1994; Powell 2012).

The increasing adoption of Anglo-American racial ideology in Louisiana and the rest of the Gulf Coast over the 19th century, especially after the Civil War, led to increased rigidity in racial classification and violence against people of color. While French and Spanish racial hierarchies had generally presented a caste system which incorporated a multitude of racial and ethnic categories, Anglo-American perspectives were much more starkly divided between black and white. For example, under Spanish rule in Louisiana, "free people of color" were allowed to enter into the military and also possessed full rights to enter into business contracts and have recourse to courts (Brasseaux, Fontenot, and Oubre 1994; Allen and Hilton 2010; Powell 2012), rights which were gradually annulled or greatly weakened after the Louisiana Purchase and throughout the 19th century.

Following the Civil War, southern states installed and enforced legal and extra-legal codes of racial segregation and white supremacy (Lemann 2006; Packard 2002). In this regard, the Gulf Coast parishes and counties were no different. During Reconstruction in 1874, Terrebonne Parish sugar cane cutters narrowly avoided major violence in an attempted strike against the plantation owners, but 13 years later in the "Thibodaux Massacre" in neighboring Lafourche Parish, more than a hundred black strikers are believed to have been murdered in the streets of the town by a mob of strikebreakers, local white residents and hired guns (Rodrigue 2001a, Rodrigue 2001b).

In 1870, U.S. Census categories expanded from white, black, or mulatto to also include Indians, but individuals were assigned categories based on their features, so children born to the same parents were sometimes assigned to different groups (see also Powell 2004) and only in rare instances as Indian. In Terrebonne Parish, the enforcement of binary racial identification in the early 20th century not only erased Native Americans from legal existence but also kept them from receiving public education for decades. Parish education officials, insisting that there were

no Native Americans in the parish, recognizing only white and “colored” pupils, barred Native American children from white schools (see Section 4.4 and Chapter 9, this volume).

White ethnics who lived along the Gulf Coast, insofar as they represented cultural and linguistic minorities in the region, were subject to increasing discrimination in the 1920s with rising nativist and racist sentiment in the country and a drive for modernization in southern states. The Louisiana State Constitution of 1921 enforced both mandatory public education and an English-only policy in the schools, such that Cajuns, a people whose first language was French and who had heretofore lived largely in cultural isolation, were forcibly drafted into Anglophone society, their language and customs mocked, at the same time the economic revolution of oil and gas development was transforming many of their communities and introducing them to new neighbors (Bernard 2003; Henry and Bankston 2002). Economic modernization and cultural marginalization in the mid-20th century blurred many of the ethnic distinctions between Cajuns and Anglos, even as mutual cultural acculturation led to new hybrid forms of culture, from Cajun French songs played to Texas Swing rhythms and the paradoxical survival of Cajun communities through their participation in the global oil industry which made it possible for them to sustain cultural life in remote bayou communities with income earned from offshore in the Gulf of Mexico, the North Sea and the Middle East (Henry and Bankston 2002; Falgoux 2007). One Cajun man, whose father worked offshore in the North Sea oilfield and was born in the Netherlands, where he lived for much of his childhood, explained that he and his brother spoke Dutch as well as English as children and would upset their mother by speaking Dutch, which she couldn’t understand, in front of her. Noting his family’s return to Louisiana, he commented, “it’s the people from this bayou that built the North Sea oil industry, they’ve built up the oilfield all around the world but they stay living right here on the bayou” (BM613b 2011).

While the white residents of the Gulf Coast had hardly been racially tolerant, the politics of the era of the Civil Rights Movement and its segregationist opposition heightened racial antagonism. Leander Perez, racist demagogue, *de facto* dictator of Plaquemines Parish, Louisiana for more than four decades, and national leader of State’s Rights and segregationist causes, vaulted that tiny parish—one with a notably racially and ethnically diverse population, as described in the Plaquemines Parish community description (see Chapter 7, this volume)—to national prominence. Fueled by siphoning off profits from the parish’s enormous reserves of oil, gas, and sulfur controlled by levee boards and other means, Perez zealously enforced white supremacy in Plaquemines. His influence extended to neighboring Saint Bernard, where many working class white New Orleanians, fleeing the city in the wake of school integration in the mid-1960s, relocated (Jeansonne 1995).

During the Civil Rights Movement, African Americans along the Gulf Coast devised and participated in several important demonstrations against segregation. The Biloxi Wade-Ins of 1959, 1960, and 1963, organized to protest white-only beaches along the Mississippi Gulf Coast, were notable among those initiatives (Pitt 2010; see Chapter 6, this volume). Likewise, responding to the failure of the southern states to integrate their schools, in 1963, African Americans in Mobile County, Alabama (*Birdie Mae Davis et al. v. Board of School Commissioners of Mobile County*, in the U.S. District Court, Southern District of Alabama, to end the operation of racially separate and dual schools for white and African American pupils within the county) and Native Americans in Terrebonne Parish, Louisiana (*Margie Willa Naquin, et al., v. Terrebonne Board of Education*, in the U.S. District Court, Eastern District of Louisiana, to end the public schools’ discrimination against Native American students) used the courts to try to end segregation. By the 1970s, public accommodations and education were

desegregated and voting rights were secured, and racial and ethnic minorities gained new economic and political opportunities for social advancement. Employment and career advancement in the Gulf Coast's major industries like the oilfield became more accessible (Wallace et al. 2001) and minority officials were elected to public office for the first time since Reconstruction in many localities (Fairclough 1999).

Despite these advances toward racial equality, long-standing patterns of economic inequality and community vulnerability to hazards continued to correlate closely with race and ethnicity in the Gulf Coast states. Activists who came to be associated with the U.S. Environmental Justice movement strove to expose these connections as early as the 1970s and 1980s (Bullard 1988; Roberts and Toffolon-Weiss 2001).

Ethnicity also continues to shape affinities within and divisions among coastal social networks. Important aspects of ethnicity in many coastal communities include phenotype, shared language, histories of migration and settlement, employment, religious affiliation and practices. In many coastal communities there exist strong relations between ethnicity and particular work niches. There exist numerous "ethnic enclaves" weaving together shared economic activity, residence, and ethnicity along the Gulf Coast, from the Vietnamese shrimpers and small business operators of New Orleans East (Airress and Clawson 1991) to the Cajun offshore service vessel (OSV) captains and oilfield businessmen of South Lafourche (Falgoux 2007). However, such ties are oftentimes community-specific and are not necessarily consistent across the entirety, or even the majority, of the Gulf Coast, or for the whole ethnic community in one town. For example, African Americans along the Mississippi Gulf Coast participate to a very minor extent in the local commercial fishing industry. However, African American participation in the seafood industry, and in particular in small scale oystering, is very significant on the east bank of Plaquemines Parish.

In addition to the wage labor and other work which has come to be performed in "enclave" settings, certain forms of business ownership, including grocery stores that feature items commonly used by specific ethnic groups, have come to be associated with particular ethnicities. For example, Hispanics from various countries and regions operate *tiendas* that generally seek to provide a broad range of culinary products and media popular throughout Mexico, Central and South America. Similarly, Vietnamese commonly operate "Oriental groceries" that offer a wide range of products common to East and Southeast Asia. Since many first generation migrants to the Gulf Coast are not highly proficient in English, "enclaves" of work and business ownership have the advantage of being able to function primarily in the proprietor's native language. Also, as stated earlier, work in industries such as commercial fishing often involves kinship groups, another example of members of particular ethnic groups working together in close proximity (Moberg and Thomas 1993).

Over the years some ethnic communities along the Gulf Coast have "formalized" their ethnic affiliations to various degrees, both regionally and locally. This has occurred through the creation of non-profit groups and participation in local festivals and events, and through forms of tourism which attempt to provide "ethnic experiences" and "authenticity." Local festivals and events which feature "ethnic performances" of various kinds as well as the expansion of a regional tourism industry based on "authenticity" have resulted in the formalization of ethnicity in different ways and on different scales, and can increase general awareness of various ethnic groups while, at the same time, limiting actual understanding of them. For example, since the 1980s, Cajun culture and identity has come increasingly to signify a subsistence fishing and trapping lifestyle that incorporates long-standing, intimate connections with the south Louisiana

wetland landscape (Bernard 2003; Wiley 2002). While historically valid, these connections are themselves relatively recent innovations in livelihood strategies related to the decline of agriculture and marginalization of poorer segments of Cajun society in the late 19th Century (Brasseaux 1992; Pitre 2003). Furthermore, this narrowed version of Cajun culture and identity can marginalize other, equally foundational aspects of Cajun history and contemporary experience. For example, Cajun participation in the offshore oil and gas industry had become, by the early 21st Century, as “traditional” a Cajun livelihood as were trapping or fishing (Gramling and Joubert 1977; Wallace et al. 2001; Austin et al. 2002; Henry and Bankston 2002; Falgoux 2007).

Race and ethnicity are tightly interwoven in Gulf Coast communities, with clear effects in the aftermath of disasters. For example, racial differentials in income and hazards vulnerability along the Gulf Coast were dramatically exposed by Hurricane Katrina in 2005 and the years of reconstruction that followed (Bullard and Wright 2009). Beyond the images broadcast from New Orleans following the storm, Native Americans living in south Louisiana rural communities were hard-pressed to rebuild due to pre-existing poverty, escalating building elevation requirements and insurance costs, and limited outside funds (Bayles 2011; Monroe 2012), especially among tribes lacking federal recognition (see Section 4.4, this volume). African-Americans and Vietnamese in coastal Mississippi witnessed casinos and shipyards rapidly rebuilt and reopened while their shattered neighborhoods were left untouched (Marks Field notes, 2011).

Community responses to the challenge of reconstruction were also marked by racial and ethnic differences, some rhetorical, others material. Time and again, Cajun, Anglo white, and Vietnamese respondents related to fieldworkers in this study a narrative of self-reliant hurricane recovery, and compared themselves, directly or more subtly, with African Americans whom they characterized as dependent on government programs and charity (Marks Field notes, 2011). In New Orleans East, Catholic Vietnamese parishioners of Mary Queen of Vietnam organized to successfully block the dumping of demolition debris in a landfill near their neighborhood (Chiang 2009). Out of that effort the Mary Queen of Vietnam Community Development Corporation (MQVN CDC) was formed, an organization that became an important resource for Vietnamese and other commercial fishermen who were living in the region following the BP oil spill. Political leaders in nearby in Saint Bernard, fearing an influx of African Americans from neighboring New Orleans into what had been a majority-white parish prior to the storm, mobilized public opposition to the construction of multi-family subsidized housing in the parish (New York Times 2011; Alexander-Bloch 2012).

The MQVN CDC is only one of a number of non-profit groups along the Gulf Coast who advocate for, and serve, the needs of particular ethnic communities. In some cases, the influence of such groups on local and regional decision making has become more pronounced since Hurricane Katrina. That hurricane and its aftermath resulted in a situation where non-profits focused on ethnic disparities in living conditions attempted to address the structural inequalities of various kinds and, on occasion, this helped some but put members of other ethnic minority groups at a marked disadvantage with respect to post-hurricane assistance and recovery. At times, such advocacy work resulted in growing lines of solidarity among ethnic group members in different areas of the Gulf, and sometimes, across ethnic communities. At times, it also resulted in a greater formalization of ethnic identity, in the sense of particular ethnic characteristics or attributes that came to be consistently presented to both ethnic group members and the broader public as being significant to that group’s identity. The following section takes a closer look at the intersection of ethnicity and social networks.

4.3. SOCIAL NETWORKS

Preetam Prakash

Social networks are critical to life and work in the Gulf Coast region. This section focuses on how these networks influence the aspects of working and living the most affected residents in the wake of the *Deepwater Horizon* disaster.

4.3.1. Employment and livelihood

While much of the United States has transitioned to largely service-based economies and jobs, the Gulf Coast states retain a higher proportion of jobs in natural resources, construction and maintenance, and production (U.S. Census Bureau 2012). Employment in regional industries, such as oil and gas and fishing, has historically been characterized by a high degree of reliance on interpersonal, local social networks. For example, new employees in the oil and gas industry, in coastal shipyards and fabrication shops, and in the seafood industry have been and continue to be recruited through social networks based on family relationships, ethnic ties, and place of origin. Prior to the formalization of hiring practices that followed the passage of the Civil Rights Act of 1964, and especially the granting of litigation enforcement authority to the Equal Employment Opportunities Commission in 1972, key personnel within the petroleum industry, such as drillers and toolpushers, commonly exercised considerable control over the hiring and promotion of their crews. Crews were often composed on the basis of kinship, friendship, and shared hometown. While this practice persists in many of the smaller contractors involved in the industry, a series of lawsuits (cf. Roberts 1998), followed by major industry mergers and acquisitions in the 1990s and subsequent industry reorganization, ensured the formalization and centralization of hiring and promotions. Especially with respect to the major energy companies, human resources departments, commonly based in Houston, exercise considerable control over these processes. Nevertheless, informal social networks still play an important role in oil and gas industry employment, and personal recommendations by current industry workers often carry considerable weight.

Similarly, in the Gulf Coast's shipbuilding and fabrication industry, considerable differences exist with respect to the importance of informal social networks in obtaining training, employment, and promotions (McGuire, Austin, and Woodson 2013). In general, larger shipyards have formal hiring and promotion processes controlled by human resources departments, as well as formal training programs. On the other hand, in many of the smaller shipyards and fabrication shops which still dot areas of the Gulf Coast, training is still acquired on the job, and the recruitment of workers often depends on kinship networks, or the recommendations of current employees. Though the number of young people seeking to enter this industry has declined as other options have opened up, many who work in Gulf Coast shipyards and fabrication shops of various sizes obtained their basic skills in welding and other crafts from older family members while still relatively young.

Employment in many facets of the commercial seafood industry is still largely based on informal social networks as well, often constituted along family and ethnic lines. Knowledge of fishing and fishing grounds is commonly passed down or exchanged within kinship groups and

circles of friendship. Fishing vessels, fishing equipment, and oyster leases all frequently are shared among family members or exchanged and sold among friends and acquaintances. While fishermen generally are not obligated to sell their catch at any particular location, many regularly unload at certain docks and processors out of familiarity and reciprocal flexibility over prices, credit, and marketing arrangements based on close relationships varying from mutual loyalty to economic dependence (Maril 1983; Durrenberger 1994; Pawlyk and Roberts 1986; Marks 2012).

As with work on fishing vessels, work in seafood processing plants and unloading docks is often structured by social networks based on ethnicity and family groups. Workers are often recruited by kinship groups and in many plants it is not uncommon to find multiple generations of a single family, or members of single ethnic group, working at one time (Juhasz 2011: 150-60). Seafood plant workers often maintain loose, continuing relationships with a number of local plant owners, since the seasonal and fluctuating nature of the work may result in their moving from plant to plant.

Networks among fishers and seafood processors are also important factors in the success of both. Seafood processors along the Gulf Coast, especially those outside of Louisiana, commonly draw a substantial amount of their product from outside of the local area in which they are based. For example, the total volume of seafood harvested by fishermen operating in the area around Bayou la Batre, Alabama, is relatively small. However, Bayou la Batre is one of the largest seafood processing centers along the Gulf Coast, and many of the medium and larger size processors there draw most of their seafood from Louisiana and Mississippi. This is also the case along the Mississippi Gulf Coast as well as in some areas in Louisiana, like Delcambre, which is home to many shrimp processors but few shrimpers (Marks Field notes, 2011). Processors in these coastal communities have established long-standing relationships with fishermen, unloading docks, other plants, and customers in order to maintain sufficient supply despite uncertain catches and steady demand despite market shifts. Furthermore, some large crab, fish, and shrimp processors also buy product from other regions of the world, although most explain they only handle imports during serious shortages of local raw material during off-seasons when their plants would otherwise be idle. Gulf Coast processors also establish intricate networks of customers to whom they sell product. These networks very commonly extend outside of the Gulf region, and their nature is dependent on the specific fishing sector in question and the interpersonal relations between that seller and their buyers based on product reputation built over time (Marks Field notes, 2011).

In many cases, there is substantial crossover among workers in commercial fishing, oil and gas, shipbuilding, and other industries along the Gulf Coast. While links between commercial fishing and oil and gas appear incongruent to many non-locals, commercial fishermen have a long history of participation in the oil and gas industry throughout the Gulf. Such connections are perhaps most pronounced in south Louisiana where commercial fishermen very commonly work in petroleum industry-related jobs when their vessels are at the dock, only to return to fishing when the next season opens. While less widespread, a number of commercial fishermen in Gulf Coast Mississippi and Alabama have also worked in the oil and gas industry over the years, frequently as OSV captains. Such movement between industries continues to this day, though changes in the nature and duration of oil and gas employment have restricted movement in some sectors (Austin Field notes, 2011).

The tourism industry also has a long history along the Gulf Coast. In areas such as Baldwin County, Alabama and Harrison County, Mississippi the industry has undergone considerable changes since the 1970s and the entrance of large corporate businesses into the

tourism market. Among the most dramatic examples of such change is found in Biloxi-Gulfport, Mississippi, where, since the early 1990s, the gaming industry has come to play a huge role in the local economy and nationally franchised hotels and casinos dominate much of the beachfront. Significant numbers of managers and workers at such businesses are non-locals and hiring is generally formally conducted through human resources departments, which has reduced the importance of local, more informal social networks. However, other important coastal tourism sub-sectors, such as charter fishing and ecotourism operations, continue to revolve mostly around independent operators and the social networks that they build up over the years. In coastal Mississippi and Alabama, most boat owners and workers in the charter fishing industry live in or very close to the communities out of which they operate. In Louisiana, the situation is sometimes different with many charter boat captains who operate out of the southern parishes residing in the New Orleans area. Still, in all of these areas, charter fishing is an industry which still mostly depends on the personal networks of clients which charter fishermen establish over the years.

Elsewhere in the United States, such as the “Rust Belt,” labor unions have served as an important vehicle for social networking. Gulf Coast employers, however, and those in the offshore petroleum industry in particular, have worked actively to block organizing attempts (Austin et al. 2002). There are a few exceptions, for example Huntington Industries in Pascagoula, Mississippi, and the longshoremen in Gulfport, Mississippi, where the unions do play a role in social networking. Petroleum industry employers do participate in numerous industry associations, such as the National Ocean Industries Association and the Association for Diving Contractors, and those help establish and strengthen social networks among owners. A number of fishermen’s associations exist along the coast, and they play a role in connecting and informing their members. Likewise, large national associations, to which many of the seafood plant owners along the coast belong, unite seafood processors.

Social networking in the Gulf Coast region can be challenging, due both to geography and the cyclical or seasonal nature of the primary industries (see also Volume II). Workers are often spread over land and water, and must be highly mobile, across both space and often employers, in order to maintain their livelihoods. It is not uncommon for shipyard welders to travel throughout the Gulf Coast, and sometimes beyond, working on various projects. Similarly, offshore captains commonly travel away from home, increasingly to overseas destinations. Commercial fishermen, especially those who own larger “offshore” vessels, regularly travel across much of the Gulf Coast and sometimes beyond. Many shrimpers will travel to various parts of the Gulf for different season openings, and will sometimes range as far as the East Coast when landings in the Gulf are low. As mentioned above, processing plant workers are also frequently mobile, although generally on a less geographically extensive level.

Such patterns of movement and migration can make it difficult for individuals to create and sustain social networks. Nevertheless, because workers frequently travel among Gulf Coast employers or venture into different industries and forms of manufacturing, but then often circle back to previous places of employment, they form and can later rely on their networks to find out where and when jobs are available. These networks frequently link occupation and ethnicity. For example, fishermen and oilfield workers in one Gulf Coast community develop acquaintances or friendships with peers in distant areas due to repeat fishing trips made over the years in response to seasonal patterns or to working together on rigs and platforms in the region and beyond. Members of some ethnic groups, perhaps especially more recent arrivals such as Southeast Asians and Hispanics, are often connected to ethnic social networks which stretch across

significant portions of the region. Some migrate temporarily to other areas of the Gulf for religious holidays or other important cultural occasions, or to work.

All the major industries of the Gulf region rely on low-paid, unskilled workers, and employers have historically recruited members of ethnic minorities, including recent immigrants, to fill those positions (see community descriptions and Volume II). Recently, to address labor shortages in even higher skilled position, employers in the tourism, retail, and shipbuilding industries have employed guestworkers, primarily on H-2B visas, in relatively high numbers. For some employers, these workers have come to constitute the majority of the workforce. To address the high levels of turnover accompanying the use of temporary workers, employers have sought to bring in the same workers year after year, thus creating long term employer-worker relationships (Austin and Crosthwait 2013).

4.3.2. Other Livelihood Strategies and Social Supports

Across the study area, and particularly among the various ethnic groups that dominate this region, extended kinship groups form the basis for household organization. It is not uncommon for multiple generations to share a single home, and social networks stemming from family relationships continue to have significant bearing on the various forms of work performed along the coast. These kinship networks are also relevant to the acquisition of food and other necessary material goods and services.

The cyclical and seasonal nature of the major industries of the Gulf Coast region, along with the abundance of potential food resources, have fostered a strong reliance on fishing and hunting and the bartering of seafood, meat, and homegrown fruits and vegetables to meet household food needs. These practices reveal another important dimension along which social networks along the Gulf Coast are constituted. Unlike many other areas in the United States, fishing and hunting to meet household food needs and for bartering is widespread throughout the region, particularly in south Louisiana, and not just among commercial fishermen. These activities are often carried out in groups, and the distribution of meat and seafood shapes and reinforces certain networks. Most commonly, game and seafood is dispensed among members of fishing or hunting parties, and among immediate and extended family members. These networks often extend to friends and casual acquaintances, where the products are traded for carpentry work or babysitting services.

Game and seafood also play important roles in many social occasions and events along the coast. For example, seafood boils provide a very common locus for community gatherings. Locally fished and hunted seafood and game also very frequently are important in more formal social occasions, for instance during religious holidays and local festivals. In some coastal communities such as New Orleans East, subsistence activities and their proceeds constitute a highly significant part of the local economy, with seafood often being exchanged for a range of commodities, such as gasoline, packaged food, and other services (United Vietnamese American Fisherfolks of Louisiana 2010).

Religion and religious institutions play a significant role in the creation and perpetuation of social networks along the Gulf Coast as well, and a diverse array of these institutions is found along the Coast, reflecting the region's lengthy and complicated history of migration and ethnic settlement. Catholicism has long historical roots in the region. Catholics were the first Christian denomination to become established in the region, and new waves of European immigration and

migration from the eastern United States brought a multitude of Protestant churches, particularly in the wake of the oil and gas industry (Austin et al. 2002). Religious affiliation at times has strengthened solidarity and collective action among adherents, as in the Civil Rights movement when African-American churches took a particularly active role in fostering social change. It has also served to divide communities around denominational differences which often overlap with ethnic identity and regional and national origins. Religious institutions have fostered the entry of new ethnic groups to the Gulf Coast, as when the Catholic Church sponsored many Southeast Asian immigrants in the 1970s and 1980s, helping to create new communities and congregations in the region. Actions like the sponsorship of migrants also brought about tensions among parishioners, such as Catholics who resented what they thought was favoritism towards Asian immigrants by the church receiving assistance in starting businesses (Marks Field notes, 2011).

The following four sections highlight the particular experiences of the three ethnic groups identified above in order to illustrate how the complex intersection of history, legal and political status, and social integration affect how members of those groups were situated to experience the *Deepwater Horizon* disaster.

4.4. NATIVE AMERICANS

Diane Austin

Though prehistoric evidence places humans within the study areas as early as 14,000 years ago, this section will address Native American⁴ presence and migration from the historic period to the present, focusing on the 1940s onward. When Europeans first arrived in the southeastern United States, they found numerous groups of Native Americans living there (see Figure 4.1 for a 1967 depiction of the groups and their territories at contact).

Even before direct contact, the advancing spread of European diseases caused widespread illness and death within Native populations that had not previously been exposed. As the European and later Euroamerican settlers advanced into the region and claimed it as their own, they killed and displaced tens of thousands of Native Americans, with many of the survivors fleeing into more remote regions. During the late 1700s, for example, the Houma Indians migrated south, away from advancing settlers and, then, along the bayous of southern Louisiana. After the United States was established, the U.S. government developed various policies to ensure that its citizens would prevail (see Canby 1981 for review). Notably for this region, in 1830 President Andrew Jackson promoted and signed the Indian Removal Act, forcing Creek, Choctaw, Cherokee, and other groups from their homelands in Georgia, Alabama, Mississippi, and Florida and moving them west of the Mississippi River to what is now Oklahoma (cf. Remini 2001). During this period, too, as large numbers of Native American groups were relocated, some individuals and families remained hidden in remote areas and retained their identities as communities.

Indian removal failed to resolve conflicts between advancing white settlers and Native people, so the U.S. government began establishing reservations for tribes and groups of tribes. Later, as competition for Indian land accelerated and with the intent of assimilating Native people

⁴ The people whose tribes are indigenous to the United States are referred to in this report as Native Americans, American Indians, and Indians. The term Indian is inaccurate but has been used in this report because it is used in federal policies and other writing on native peoples and also is the one many natives use when talking about themselves.

into the larger U.S. society, the federal government dispossessed many reservation tribes of their lands; from 1887 to 1934, land controlled by Native Americans was reduced from 138 to 48 million acres. Then, with the Indian Reorganization Act of 1934 and in recognition that Indian people should be allowed to exist in their own communities, the federal government set out to help tribes that it had formally recognized to establish their own governments, laws, and policies modeled after the U.S. Constitution. These governments are referred to as IRA governments after the Act that established them. During the 1950s, the federal government reversed itself again and terminated a number of small tribes and, by the late-1960s, shifted the thrust of Indian policy again, this time aiming to support Indian self-determination with new laws passed to address Indian education, healthcare, and housing. For example, the Indian Education Act (today referred to as Title VII of the Elementary and Secondary Education Act) was passed in 1972 and provides for educational services to American Indians and Alaska Natives, whether or not those individuals are members of federally recognized tribes. As early as the 1950s, but especially in the past several decades, recognizing the limitations of IRA governments, many U.S. tribes began to rewrite their constitutions, seeking to adopt structures more aligned with their traditional forms of governance and better equipped to deal with the complexities of modern society (see, for example, American Indian Study Center n.d.).

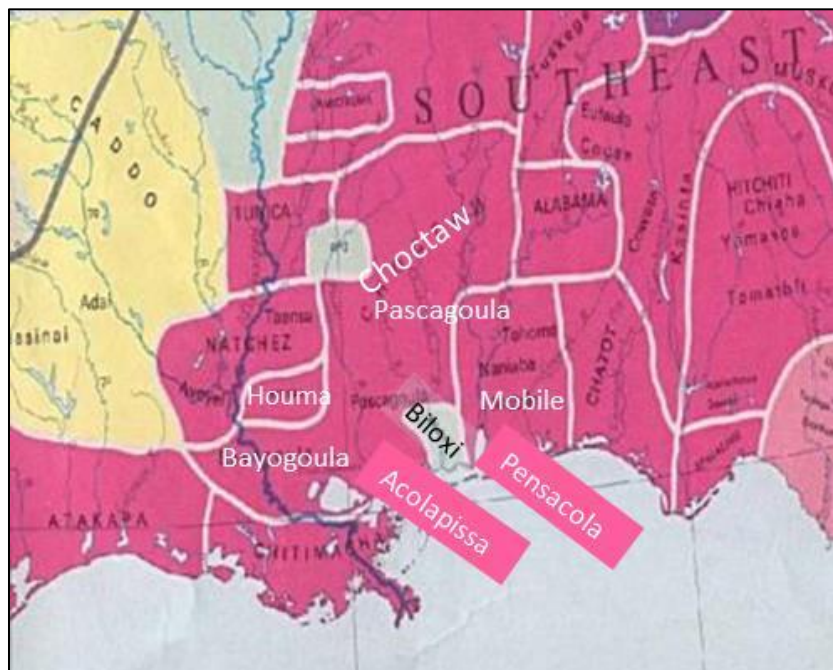


Figure 4.1. Early Indian tribes, culture areas, and linguistic stocks, William C. Sturtevant, Smithsonian Institution 1967
Source: Gerlach 1970

Indian tribes have achieved federal recognition status through treaties, acts of Congress, presidential executive orders and other federal administrative actions, and through federal court decisions. As tribes began to assert their rights in the era of self-determination, and many Indian communities sought status as tribes, the U.S. government moved to develop more consistent standards for federal recognition. In 1978, the Bureau of Indian Affairs published final rules establishing the seven criteria that any future groups had to meet to secure federal tribal acknowledgment. In 1994, Congress enacted the Federally Recognized Indian Tribe List Act (108 Stat. 4791, 4792), which formally established that an Indian group may become federally recognized either by an Act of Congress, the administrative procedures under the 1978 rules, or a decision of a U.S. court (Bureau of Indian Affairs 2012).

As of 2010, there were 565 federally recognized tribes in the United States. Many of these tribes have lands which are legally reserved for them under a treaty or other agreement with the United States, or executive order, federal statute or other administrative action. Due to earlier Indian removals, these lands are often distant from where tribe originated. The title to these lands is held in trust on behalf of the tribe by the federal government, and they are considered permanent tribal homelands.

The early arrival of Europeans in the southeastern region, the harsh Indian removal policies enforced there, and the failure to distinguish American Indians living there from the general population, for example, in U.S. Censuses prior to 1900 (National Archives n.d.), all contributed to the destruction of the region's Native American populations and to the challenges the remaining groups have faced in documenting their histories. There are only six federally recognized tribes in Louisiana, Mississippi, or Alabama. The Chitimacha sued the federal government in the mid 1800's and won confirmation of title to 1,062 acres of their land, though that was reduced to 260 acres in subsequent years by taxation and continued litigation (Sovereign Nation of the Chitimacha 2005). Still, the tribe was not recognized until 1917. The U.S. government extended services to the Coushatta and Jena Choctaw people in the 1930s, but, in 1953, discontinued services to both communities and proposed termination legislation for the entire state (Precht 2010). Though the legislation was not passed, the services to the Coushatta and Jena Choctaw communities were not restored. In 1945, the Mississippi Band of Choctaw Indians received federal recognition; the U.S. government holds in trust for the Choctaw over 35,000 acres in 10 counties in central Mississippi (Mississippi Band of Choctaw Indians n.d.). Federal recognition came decades later for Coushatta Tribe (1973) and the Jena Band of Choctaws (1980). Then, in 1981, the Tunica-Biloxi of Louisiana were recognized, followed in 1984 by the Poarch Band of Creek Indians in Alabama. None of these six tribes have reservations within the study area, though four are located nearby (see Figure 4.2).

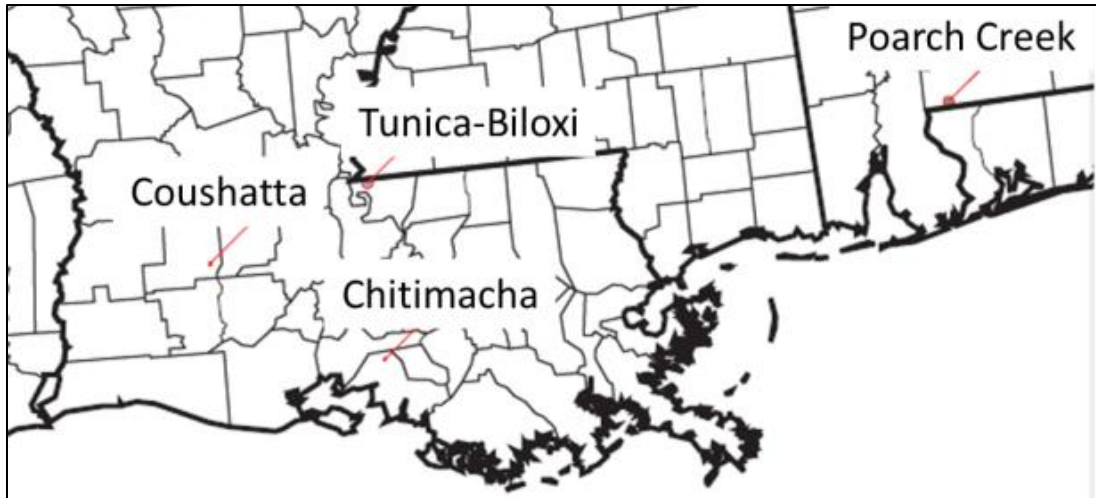


Figure 4.2. Indian reservations near the study areas.
Source: Natonal Park Service n.d.

Several other tribes have been recognized by their state governments, a process that generally entails action by the state legislature and is unrelated to federal recognition. Three state-recognized tribes reside within the study areas and will be discussed here; all have petitioned for federal acknowledgment. The Indian identity of their members has been acknowledged at both the state and federal levels, but their status as tribes has been questioned, primarily due to the ongoing incorporation of members of different tribes and ethnic groups into their families and communities.

The first groups of Houma leaders to make official claims on behalf of their people did so in the early 1800s; the city of Houma, Louisiana was named after the tribe when it was founded in 1834; and through the early decades of the 1900s Houma people, anthropologists, and federal agents attempted to secure federal services for the Houmas (Campisi 2004, Ng-A-Fook 2006). In the early 1970s, first the Houma Tribe and then the Houma Alliance incorporated as not-for-profit organizations, and in 1977 both were recognized as Indian communities by the state of Louisiana. In 1979, the two groups joined as the United Houma Nation (UHN), forming a not-for-profit organization. The UHN established an IRA-style government and in 1985 filed its petition for federal recognition. In 1990, the state of Louisiana recognized the UHN as an Indian community. In 1981, the six federally recognized tribes and the UHN formed the Intertribal Council of Louisiana. That organization provides guidance and oversight to the Louisiana government in matters concerning Native Americans. The Louisiana Unmarked Human Burial Sites Preservation Act of 1992, for example, creates a Board to oversee the implementation of the act and stipulates that “One member appointed from a list of three persons nominated by the Louisiana Intertribal Council. The person appointed must belong to a tribe recognized by Louisiana but not by the federal government” (Louisiana Office of Cultural Development 1992). The UHN petition was denied in 1994, the UHN filed its rebuttal in 1996, and the tribe is still awaiting federal determination (United Houma Nation 2008a).

Facing seemingly insurmountable hurdles in the federal recognition process and asserting that they have closer ties to the Chitimacha, Acolapissa, Atakapas, and Biloxi peoples, in the mid-1990s some former members of the UHN established the Point-au-Chien Tribe, adopted a constitution, established a tribal council, and filed its Articles of Incorporation with the

Louisiana Secretary of State. In 1996, the tribe submitted a petition for federal acknowledgment with the Bureau of Indian Affairs; the tribe is preparing documentation to support its petition (Pointe-Au-Chien Tribe n.d.a). In 1996, another group of individuals who separated from the UHN and identify themselves as an amalgam of the Biloxi, Chitimacha, Choctaw, Acolapissa, and Atakapa people (Biloxi-Chitimacha-Choctaw of Louisiana n.d.-a) formed a tribal council and filed a petition for federal recognition as the Biloxi-Chitimacha Federation of Muskogees, Inc.; they, too, are awaiting determination (Biloxi-Chitimacha-Choctaw of Louisiana n.d.-b). In 2004, the Louisiana legislature acknowledged the Indian ancestry of members of both the Biloxi-Chitimacha Federation of Muskogees, and the Pointe-au-Chien Tribe so that those individuals would qualify for Indian education and health care benefits (Louisiana Senate Concurrent Resolution No. 105).

Tribal recognition is a legal and political process and does not define what it means to be a Native American. According to the U.S. Bureau of Indian Affairs, “No single federal or tribal criterion establishes a person's identity as an Indian. Tribal membership is determined by the enrollment criteria of the tribe from which Indian blood may be derived, and this varies with each tribe.... To be eligible for Bureau of Indian Affairs services, an Indian must (1) be a member of a tribe recognized by the federal government, (2) be of one-half or more Indian blood of tribes indigenous to the United States; or (3) must, for some purposes, be of one-fourth or more Indian ancestry.... The Bureau of the Census counts anyone an Indian who declares himself or herself to be an Indian. As of 2010, the U.S. Census estimated there were more than 2.9 million American Indians and Alaska Natives living in the United States” (Bureau of Indian Affairs 2012). Table 4.3 shows the number of American Indians living in the study communities in 2000.

Table 4.3. Number of Persons in the Study Communities Identifying as American Indian and Native Alaskan Alone in 2000

2000	American Indian and Native Alaskan alone
Bayou la Batre	9 (0.4%)
Biloxi	
Biloxi - 39530 Zip Code	
Dulac	617 (42.2%)
Larose	279 (3.8%)
Cutoff	277 (4.6%)
Empire	
Pointe a la Hache (N/A)	1 (0.5%)
Port Sulphur	97 (5.5%)

Source: U.S. Census Bureau 2000

As noted earlier, as one step in the process of applying for federal recognition, each of the tribes established an IRA-style government. The United Houma Nation reorganized its government in 2002 and is governed by a principal chief, 11-member tribal council, and sergeant-at-arms and maintains offices in Golden Meadow and Houma, Louisiana. Its tribal council has representatives from six parishes where most of the 17,000 tribal members live: Jefferson, Terrebonne, St. Mary, Lafourche, St. Bernard, and Plaquemines (United Houma Nation 2008b). Also in 2002, the UHN established a separate not-for-profit organization, the United Houma Nation Vocational Rehabilitation Services, with offices in Houma, Louisiana.

The approximately 680 members of the Pointe-au-Chien Tribe are concentrated along Bayou Pointe-au-Chien in Terrebonne Parish, and the tribe maintains a post office box in Montegut. The tribe is governed by a chairman, second chairman, and 8-member tribal council (Pointe-Au-Chien Tribe. n.d.-b). The Biloxi-Chitimacha tribal members are concentrated in lower Lafourche Parish and in Grand Caillou-Dulac and Isle de Jean Charles in Terrebonne Parish and formed a Grand Council with a chairman, vice-chairman, and secretary/treasurer, each representing one of the three tribal communities (Biloxi-Chitimacha-Choctaw of Louisiana n.d.-c). Though members of all three tribes have familial ties across tribal lines, the political separation has restricted both formal and informal communication and cooperation. Nevertheless, many individuals continue to interact regularly with their relatives, regardless of their tribal affiliation.

The Native Americans of southern Louisiana have traditionally fashioned their livelihoods from fishing, hunting, and trapping, living on their boats and moving from place to place in seasonal cycles. Recognized for their skill as trappers, some individuals found opportunities beyond their central communities in Lafourche and Terrebonne parishes and eventually settled on lands as far away as St. Bernard Parish. Women and children were frequently employed in the seafood processing plants. Though they interacted with the French and Cajun populations, and assimilated others into their communities, they remained distinct. Even at the end of the 20th century, for example, Houma tribal elders still spoke the conservative French dialect anthropologists had recorded at the beginning of the century, intermingled with Muskogean words, rather than the French or Cajun French of their neighbors (Wallace et al. 2001, Campisi 2004). Anthropologists noted, "The Houma are now the most conservative of all Louisiana French speakers" (Kniffen, Gregory, and Stokes 1987: 126). Many settlements were formed by the offspring of Indian and non-Indian unions wherein the residents retained Indian identity. Because of such intermarriages with blacks as well as whites, prominent Terrebonne Parish school officials denied that the Native Americans even existed (see "The So-Called Indians" in Bourgeois 1938). Unable to attend white schools and refusing to be classified as "Negroes," they were largely ignored by the school system.

Sabine, that was the name they used to call Indian children. It was the lowest form of life there was. When we'd go to school, we'd have kids calling us names all the time. My mom worked all the time to make sure we had everything we needed to go to the white schools. One time when I was having trouble, my mom went and had a meeting with the principal. He called us in and looked me in the eye. He said, you're not having any problems are you? I was the type who went home and cried. My sister was the fighter. She never let anybody call us anything. [LA-DA-042; Houma educator] (quoted in Wallace 2001: 342).

My parents sent me to the Catholic High School. The word was that as an Indian you would spend your life trawling and trapping. You only needed a little education. My principal was appalled that we could not go past the eighth grade. It was a priest that got me on in school. I was in the hospital after a hunting accident. He had been on the bayou for 4 years but did not know we could not go to high school. He was sitting by my bed, making small talk. He asked me where I was going to high school. I told him, "Father, I can't go to high school." He asked why, and I told him Indians could not go past eighth grade. Here was this big old guy who had tears in his eyes. Then he got mad. He went to talk to the principal of the Catholic High School. Brother , he was the principal, on the

first day he announced over the speaker, "[...], an Indian, will be attending our school. We expect him to behave and for the rest of you to behave..." [LA-DA-053, Houma educator] (quoted in Wallace 2001: 347).

Like the African Americans of the region, Native Americans who were able to obtain an education generally had to leave to find job opportunities appropriate to their knowledge and skills. For those who remained, due to their lack of formal education, opportunities in the nascent petroleum industry were limited. Some Native Americans who left the area to serve in World War II did return to take jobs in the oilfield, though most continued working in seafood and trapping. As the oil industry reached farther into their communities, bringing fabrication and shipyards, tank farms, and boat docks, some of them began to work there. Due to their familiarity with the bayous and waterways and their skill with operating and maintaining boats, Native Americans also began working on offshore service vessels.

In the 1970s, following passage of the Indian Education Act, the Lafourche and Terrebonne parish school boards established Indian Education programs. These programs have provided tutoring, cultural activities, and other forms of support for Native American students in these districts. In the early years, because of the negative treatment Native Americans had received in the schools, the program leaders struggled to enroll youth in their programs (LA-DA-043 1997, LA-DA-053 1997, LA-DA-054 1997). In recent decades, however, increasing numbers of Gulf Coast residents have begun to express pride in being Native American and tribal events, youth camps, and programs are well attended. Tribal leaders have placed significant emphasis on education; many young people who have graduated from high school have either returned to the region to help their communities or provide support from a distance. Nevertheless, low levels of literacy and educational attainment are still a problem, especially for older tribal members. This translates to limited occupational mobility. Many men still shrimp, crab, trap, and work as handymen and laborers for oilfield service companies and government offices. Female tribal members still work in shrimp sheds, clean houses and offices, drive school buses, and perform basic clerical duties.

At the turn of the 21st century, tribes and their members were contending with many problems. With many of their communities located in the southern reaches of Terrebonne, Lafourche, and Plaquemines parishes, they experienced firsthand the negative effects of coastal erosion and land loss as even tropical storms flooded their communities. The 2005 and 2008 hurricanes had significant negative effects on these communities (see Chapter 9 this volume). Reaching out through their websites and other media outlets, though, the leaders of each of these groups solicited resources and became part of national dialogues on race, poverty, and disasters.

4.5. VIETNAMESE AND VIETNAMESE-AMERICANS

Brian Marks

Vietnamese-American communities exist around the United States, including along the Gulf of Mexico Coast. Two of the nation's largest Vietnamese urban communities are in the region. Metropolitan Houston has the 3rd largest Vietnamese population of any U.S. city, amounting to 1.7% of the population of the city and 1.5% of that of the Consolidated Metropolitan Statistical Area (CMSA). New Orleans is the 15th largest Vietnamese-American city with 1.5% of the residents of the city and 1.1% of the residents of New Orleans MSA

identifying as Vietnamese in the 2000 Census. Numerous Vietnamese enclaves are scattered along the coast from Texas across south Louisiana into Mississippi and Alabama. In Bayou La Batre, Alabama, no less than 23% of the 2000 population identified as Vietnamese, almost equal to the 22.5% in Amelia, Louisiana. Also in 2000, 11.6% of the people residing in New Orleans' westbank suburb of Avondale were Vietnamese, as were nearly 10% of the people in the Buras-Triumph area near the southern end of Plaquemines Parish, Louisiana (U.S. Census Bureau 2000a).

Like in other parts of the United States, Vietnamese settlement in the Gulf Coast began in the mid-1970s following the collapse of American-backed governments in South Vietnam, Cambodia and Laos and the exodus of what would eventually become millions of Indochinese refugees from those countries. The Indochina Migration and Refugee Assistance Act, passed in the U.S. Congress in 1975, began to address the post-war refugee crisis by granting some Indochinese immigrants special status in seeking U.S. citizenship and funding \$405 million to the Indochinese Refugee Assistance Program (IRAP) between 1975 and 1979, providing education, housing, health, and employment assistance for immigrants (Smithsonian Asian Pacific American Program 2010; Rutledge 1992; Hein 1995; Vo 2000; Mumphrey and Wilson 1979).

Vietnamese immigrants to the Gulf Coast came in waves, with pulses of refugees fleeing Southeast Asia, and from resettlement and subsequent internal migration of immigrants already in the United States. While the first large influx of Vietnamese began arriving in 1975 just after the chaotic collapse of the South Vietnamese regime, many more came years later. The first were the so-called "boat people" of the late 1970s and 1980s, escaping poverty and political persecution in a reunified Vietnam. Some were Catholics who felt insecure in a Communist Vietnam; many of those were Northern Vietnamese who first fled south in 1954 and left their homes once again. Many Vietnamese of Chinese ancestry left after political tensions between Vietnam and China became extreme and the Vietnamese government expropriated the assets of Saigon's Chinese commercial class in 1978; others, veterans of the South Vietnamese Army and civil service, left after being released from detention; and still others got out to escape the chronic and escalating economic and political constraints they lived under in post-war Vietnam (Canh 1983; Kelly 1977; Hein 1995). The Vietnamese government and UN High Commission for Refugees' establishment of the Orderly Departure Program in 1982, which made it easier and much safer for people to emigrate than leaving surreptitiously at night in overloaded boats often attacked by pirates, also contributed to rising Vietnamese immigration to the U.S. in the 1980s that translated into ongoing growth of Vietnamese communities on the Gulf Coast (Kelly 1977; Montero 1979; Freeman 1995; Vo 2000). The Amerasian Homecoming Act of 1987 (GAO 1994; Migration and Refugee Services 1988) allowed children of American men and Vietnamese women, remaining in Vietnam and facing discrimination after the war (McKelvey 1999; Yarborough 2005), to immigrate to the U.S. with immediate family members. Following the normalization of diplomatic relations in 1993, other immigration programs such as the U.S.-Vietnam Humanitarian Resettlement Program began to assist certain categories of Vietnamese emigrants leave the country for the U.S. (U.S. Department of State 2005).

Since becoming established in the region, Gulf Coast Vietnamese have shifted where they reside and work and have experienced new waves of regional in-migration and out-migration, adjusting to changing economic conditions and natural disasters. Upon arrival to the Gulf Coast, some Vietnamese communities were distinguished by members' place of origin within Vietnam. Today, while some differences are still noticeable, intra-regional migration,

inter-marriage and acculturation across the generations has muted those contrasts. Contemporary Vietnamese-American communities on the Gulf are socioeconomically differentiated according to their employment base and vulnerability to coastal hazards. In some communities, employment is dominated by commercial fisheries and seafood processing, while in others, work is strongly linked to casino tourism or shipyards. In many places, Vietnamese-owned businesses and community institutions severely damaged by hurricanes in 2005 and 2008 have rebuilt (Leong et al. 2007), but out-migration of Vietnamese to places in the region they deem less vulnerable to storms or away from the Gulf Coast is common, especially among younger, second- and third-generation Vietnamese-Americans seeking lives and careers different than their immigrant parents and grandparents.

The Southeast Asian origins of Gulf Coast Vietnamese residents are quite varied, as are their often harrowing emigrant journeys across the Pacific to the U.S. and, often after many years, to the Gulf region. Some Vietnamese trace their families back to coastal villages in North Vietnam, places where fishing was a common livelihood and Catholicism the main religious affiliation, from whence their ancestors fled to South Vietnam in 1954 after the Communist victory over the French. Settling on Southern Vietnam's coastal fringe in the environs of Vũng Tàu southeast of Saigon and Phan Thiết further east, these Catholic fishing communities fled again in 1975 after the Communist victory in the South. A few elderly Vietnamese-Americans encountered in 2011 still spoke with North Vietnamese accents, and a larger number identified culturally as Northern, not Southern, Vietnamese despite living longer in South Vietnam. Other Vietnamese-Americans of Northern origin became urban professionals in Saigon after 1954, also fleeing the country after the fall of the Republic of Vietnam (Arden 1981). A couple who run a nail salon in suburban Jefferson Parish, for example, are Catholic Northern Vietnamese who came South in 1954 to Saigon where they became schoolteachers until 1975.

BM609, a pharmacist in east Texas, lived in Northern Vietnam his first 15 years until 1954, and then his family fled South where he lived for 21 more years. In the South, BM609 studied Western pharmacy and practiced pharmacy until 1975 before coming to the U.S. in 1985, at first living in Gretna near New Orleans. He studied English for three years before starting on another pharmacy degree which he eventually got from Xavier University, saying he had no choice but to take this long path - he had the professional skills but not the English, so he studied and supported himself doing odd jobs while he went to school.

Vietnamese-Americans with South Vietnamese ancestry came from many parts of the country, a few more prominently than others. Some people spoken with in 2011 were from Saigon, often government officials, teachers, and other professionals who left after the Communist takeover. A considerable number of Vietnamese-American people of Chinese ethnicity claimed origins in the Chợ Lớn section of Saigon, the Chinese commercial center of the city, or nearby towns nearer the South China Sea. Other people, especially those working in the commercial seafood industry, identified themselves as natives of coastal provinces in Central and Southern Vietnam, places like Nha Trang, Vũng Tàu, Bến Tre, and Rạch Giá. A few people contacted in 2011 were Vietnamese born in Cambodia but whose families fled violence there in 1970, later leaving again for America. Religious affiliations among Vietnamese-Americans from all regions of the country varied considerably, with an overall distribution primarily between Buddhist and Catholic faiths with smaller numbers of Protestant Christians (Marks Field notes, 2011). The family of one Louisiana shrimp dock owner, BM477, was involved in the seafood business in Vũng Tàu, a coastal port in South Vietnam, operating a landing and fuel dock there until 1975 when the entire family fled to the U.S. fleet waiting nearby offshore. The family of

her husband, a shrimp vessel captain, are from Nha Trang, a coastal city in Central Vietnam. After their marriage in Louisiana, BM477's father taught her husband how to shrimp. The neighboring shrimp dock, she explained, was all Nha Trang people's boats, in-laws in her husband's family (BM477).

The most common factor in the life history of Vietnamese-American immigrants was not so much religion, or region, or proximity to the coast, or familiarity with a fishing livelihood, but participation in the South Vietnamese Army and government. After 1975, with their livelihood options severely limited, many put in prison for a time and facing continuing political hostility from the victorious Communist regime, former South Vietnamese soldiers left the country when and however possible. Leaving Vietnam in dangerous, often disastrous, sea voyages on their own or with their families, Vietnamese lucky enough to arrive safely in the Philippines, Malaysia, Thailand and other receiving countries were placed in temporary refugee camps, sometimes for years, awaiting entry to the U.S. or other destinations. After moving through transit camps on Guam and receiving centers on four military bases in the continental U.S., new Vietnamese immigrants were resettled through the efforts of federal, state, and local governments, religious charities, and private sponsors who took responsibility for families. The U.S. government initially scattered Vietnamese immigrants widely across the country, seeking to prevent the formation of Vietnamese ghettos in major cities, but over their first years of life in America, as Vietnamese-Americans gained employment and adapted to life in their new country, they began reunifying their extended families and relocating to places with other Vietnamese from the same parts of Vietnam of the same faith (Kelly 1977; Rutledge 1992; Hein 1995; Vo 2000; Marks Field notes, 2011). Many people now residing in the Gulf Coast got there years after arrival in America, leaving the towns and cities where they were resettled for better paying work, a warmer climate, and proximity to family and other Vietnamese in newly established communities like Eastern New Orleans. One man, a shrimper in lower Plaquemines Parish, came to the U.S. in 1985 and was first resettled in Nebraska where he lived for five years doing welding work. Then, a friend of his told him about the better money he could make in commercial fisheries in south Louisiana (BM504 2011). Another Vietnamese man from Plaquemines parish (BM497a) described how he escaped Vietnam in 1984 in a boat designed only for river travel that took him all the way to Singapore. BM497a's brother, living in New Orleans already and working at the time in the offshore oil industry, sponsored him to the U.S. from an Indonesian refugee camp.

On the Gulf Coast, a large group of refugees were resettled in New Orleans starting in 1975. The city's Associated Catholic Charities sponsored 2,600 refugees, funded primarily with IRAP funding, and resettled them into apartments scattered across the city. The largest group of Vietnamese was resettled into several apartment complexes in New Orleans East that would eventually become the basis of the large Vietnamese community of Versailles (Airriess and Clawson 1991; Mumphrey and Wilson 1979). Apartment complexes on the westbank of the Mississippi River became the nexus of other Vietnamese neighborhoods that still exist today and now possess Catholic parishes and Buddhist temples. By 1978, over 7,000 Indochinese immigrants lived in Louisiana, with 5,500 in the New Orleans metro area, making Louisiana the state with the 4th largest Indochinese population in America behind California, Texas, and Pennsylvania. The influx of Vietnamese into subsidized housing and low-wage jobs in New Orleans led to charges of ethnic favoritism and discrimination from some African-Americans in the city (Mumphrey and Wilson 1979; Brown 1978; Urban League of New Orleans 1978).

These immigrants and their family and friends, drawn to the community from isolated resettlement sites in the northern United States, congregated together, established businesses, churches, temples, and civic associations, and contributed to the formation of other new Vietnamese neighborhoods around the Gulf Coast (Freeman 1995; Airriess 2002). Some people living in New Orleans had fishing experience, and soon got boats that they initially started working in lower Plaquemines Parish (Arden 1981; Starr 1981). Other Vietnamese resettled in small towns across south Louisiana, Alabama, and Texas began fishing, too, in the 1970s, eventually establishing clusters of Vietnamese fishing vessels in places like Intracoastal City, Dulac, Larose, Bayou La Batre, Port Arthur, and Barataria in lower Jefferson Parish (Marks Field notes, 2011). Hostility from established commercial fishermen to new Vietnamese entrants was serious and sometimes violent, although their reception varied depending on the place and the individual. A Creole man, seafood buyer and former commercial fisherman in south Louisiana conveyed a story from the early 1980s how local non-Vietnamese fishermen threatened to burn the first three Vietnamese fishers' boats on his bayou but were dissuaded when he told the Vietnamese to park next to his boat and admonished the others to let the newcomers fish (BM580 2011).

Vietnamese fishermen, facing continuing harassment and restrictions, left Plaquemines parish for a time (Arden 1981), although there is a Vietnamese fishing presence and residential community there, around the westbank town of Buras, today. The fishermen were tolerated elsewhere by seafood businessmen who wanted their catch and their labor for their processing plants (Durrenberger 1996). Biloxi's considerable Vietnamese community came into being in 1977 when a local oyster processor, lacking a stable and plentiful labor supply for the dull and strenuous work of shucking, tried bussing in Vietnamese workers from nearby New Orleans. Many Vietnamese began working in Biloxi, and shortly thereafter the processor helped some get into public housing nearby. Within a few years, the Point Cadet neighborhood on the east side of Biloxi was home to a large Vietnamese community, including many New Orleanians and some of the fishermen displaced from lower Plaquemines (PP454 2011; Arden 1981; Durrenberger 1996; Boudreaux 2011; Bounds 2011). Pooling the financial resources of kin and co-ethnics and with help from local shrimp processors, a number of Vietnamese began to own and operate shrimp boats, with the initial boat owners later financing their relatives to get their own boats (Marks 2012). After starting out in the 1980s with small wooden and fiberglass shrimp boats (Starr 1981), many Vietnamese captains expanded in the 1990s into larger, steel hulled Gulf trawlers equipped with on-board freezers that enabled month long trips. Such expansion of the Vietnamese presence in the shrimping industry was made possible through the use of household labor on fishing boats, the bulking of savings among extended family and friends to purchase boats, and credit that was available through government vessel construction loans and engine companies. A seafood dock owner and commercial fisherman shared their stories:

My dad worked at first when he arrived in America at a slaughterhouse in Baton Rouge. There were nine kids in the family all together and our sponsor was an Italian-American man in Baton Rouge - he was Catholic, like our family. In 1976 my dad got a skiff and started shrimping. Around that time, the family moved to Abbeville from Baton Rouge. Bit by bit, like we Vietnamese do, he saved money, we help each other out and work really hard and borrow money from each other so he got bigger and bigger boats. And my mom, she started a po-boy shop in New Orleans, they've got three locations now and everybody in New Orleans knows them. (BM477 2011)

I came to the U.S. in 1981. At first I was living in Georgia. I worked at a chicken plant for about a year and then I went to Florida for a year before I moved to Mississippi in 1983. I've been here since. I started out working as a deckhand for 10 years before I got enough money to build my own boat - a small boat - in 1993. I built it right near here in East Biloxi. Then in 1996 me and a friend got this boat that I own now. We went in on it together; we'd work the newer boat and the older, smaller one in turns. In 1999 I got this boat for myself and I sold the little one. (BM450a 2011)

The convergence of relatively high shrimp prices and low diesel prices in the late 1990s pushed the investment boom in big steel hull shrimping vessels even faster, so that by 2000 many Vietnamese shrimpers had taken on debts in the hundreds of thousands of dollars for new Gulf shrimp freezer boats (Marks 2012; BM598). A Vietnamese shrimper in Port Arthur, Texas, first arrived in 1985 and has been a shrimper ever since. Originally from Đà Nẵng in Central Vietnam, he learned trawling from other Vietnamese in Texas. He used to have two boats, but sold one of them in 2006, keeping his current trawler to work himself with three deckhands. "I'd say about 40% of the boats in the fleet were lost during the 2000s because people couldn't afford them anymore, with shrimp prices so low and fuel so high. People like me and my deckhands, we're older now, when we came to the U.S. we didn't have an education so we had to get into a business like this to make a living and now we can't stop. We're too old and this is all we know how to do" (BM601a 2011).

In the Mobile area the Catholic Church and local seafood processors facilitated the settlement of Vietnamese as well as Laotians and Cambodians along the Alabama coast, particularly around Bayou La Batre. In both Bayou La Batre and Biloxi, over the 1980s and 1990s the gradual shift of Vietnamese men from initial jobs at seafood processing plants to working and later captaining shrimp boats resulted in the plants mostly employing women and younger Vietnamese. In those areas, Vietnamese women's entry into seafood processing work continues to earn them praise from processing plant owners for having "saved" the industry from its chronic labor recruitment problem (Moberg and Thomas 1993; PP936 2011).

In other areas, very different employment patterns emerged among Vietnamese immigrants. In towns like Amelia, Morgan City, and Harvey, Louisiana with oilfield-dependent economies, Vietnamese communities there followed broader patterns, primarily into entry-level jobs in shipyards and offshore fabrication where many men still work. Avondale shipyard, a military shipyard on the westbank of Jefferson Parish, attracted many Vietnamese workers from nearby neighborhoods. Still, unlike some other ethnic groups like Cajuns, Vietnamese on the Gulf Coast are not well represented in all stages of the offshore oil and gas industry; apart from shipyard, fabrication, and machine shop work in a few oilfield towns, Vietnamese-Americans contacted for this project did not work in the oilfield (Marks Field notes, 2011). One welder, who had lived in Pasadena, California, moved to Morgan City, Louisiana, because, he said, "the cost of living is much cheaper here than in California so you have more money to spend, you don't have to spend it all on rent" (BM490b 2011). This individual estimated that 90% of the Vietnamese men in Morgan City and its environs worked as welders, saying many like him moved from California seeking a cheaper cost of living and because they had extended family connections already in Louisiana. Another Vietnamese man working in the oilfield service sector in Morgan City had lived for 35 years in a neighborhood of the nearby town of Amelia, home to a small Vietnamese Catholic church and about 50 Vietnamese families. He said 80 to 85% of the

Vietnamese men in that community were welders or fitters in the nearby shipyards or worked in machine shops as he did (BM493 2011).

Elsewhere, the tourism industry provided sources of employment for Vietnamese women and men, especially in coastal Mississippi after the arrival of the casinos in the early 1990s. The 1990s and 2000s witnessed a movement by younger, better educated members of the community away from the commercial seafood industry. In those years, many now middle-aged first-generation Vietnamese also shifted their employment, from heavy occupations like shrimping, shucking oysters, picking crab, and welding in shipyards to open small retail enterprises across the Gulf Coast. Reinvesting profits from fisheries and wage labor, Vietnamese opened grocery stores, convenience and liquor stores, gas stations, dry cleaners and alteration shops, Vietnamese and Chinese restaurants, and especially nail salons (Tran 2008) which proliferated across the strip malls and shopping centers of Gulf Coast towns and cities. A convenience store owner in south Louisiana commented:

My parents came to the U.S. in 1985. We lived at first in California, and my dad came to Louisiana soon after because he had family members doing fishing here. He'd work a few months every year fishing and the rest of the family stayed in California year-round. Back then you could make a lot of money shrimping because oil was a lot cheaper and shrimp was more expensive, so the margin was higher. When my family moved to Louisiana in the mid-1990s and my parents bought this store, my parents were getting older and they wanted to work on shore and bring the family together (BM466 2011).

Already by the 1980s, some wealthier Vietnamese began moving out of their original ethnic enclave communities into newer suburban homes and supported the construction of new structures, such as new Catholic churches and Buddhist temples, in Port Arthur, Versailles, and Biloxi (Marks Field notes, 2011). Vietnamese immigrants continued to arrive through family reunification and relatives and friends already in America continued to move to the Gulf Coast from other ethnic enclave communities, especially from California, seeking a lower cost of living and simpler lifestyle. Other Vietnamese living on the Gulf wanting faster-paced careers in bigger cities left for places like California, Houston, or northern Virginia where large Vietnamese communities also exist. One Vietnamese woman managing a Mississippi Gulf Coast motel at the time of this study first lived in Oregon after being resettled in the United States, then moved to New Orleans, on the westbank in Terrytown. In 1996, following a shooting that put a bullet through her front window, she left New Orleans for Mississippi, then had her entire house destroyed in Katrina in 2005, only collecting enough insurance money to rebuild further north away from the coast after years of lawsuits (BM446 2011). Her relatives in California and Oklahoma, she noted, had more prestigious jobs in high-tech industry, but the cost of living, especially in California, was prohibitive to her and she found the urban lifestyle unappealing.

In the 2000s, the sharp economic downturn of the commercial seafood industry and the disastrous hurricanes of 2005 and 2008 greatly affected Vietnamese people along with their neighbors on the Gulf Coast. After 2001, shrimpers were caught in a ruinous cost/price squeeze as a flood of cheap farmed shrimp imports cut shrimp prices more than 25% while diesel prices rose ever higher, more than tripling over the course of the decade (Marks 2012). The economic crisis harmed all commercial shrimpers, but Vietnamese shrimpers suffered especially during the 2000s given that they owned many large, expensive Gulf trawlers, recently financed with interest and insurance payments alone amounting to thousands of dollars a month. By 2005, after years

of ruinous prices, many Vietnamese shrimpers' boats had been repossessed and some younger fishermen, often the sons and nephews of first-generation immigrant shrimpers, were leaving the business for good. The situation worsened considerably when Hurricane Katrina struck the Gulf Coast in August 2005. In addition to the terrible wind damage and high flooding the storm inflicted on Vietnamese communities like Versailles in New Orleans and Point Cadet in east Biloxi, Katrina disabled a great deal of seafood industry's infrastructure and tossed many fishing vessels high onto shore. The disruption of life and business by Katrina pushed many more fishermen already facing financial difficulties into default on their boat notes. High diesel prices and low shrimp prices continued to plague the shrimp industry into the late 2000s. In 2010, with shrimp prices the highest seen in a decade and fuel prices considerably moderated from the highs reached in 2008, Vietnamese fishermen, like others in the seafood industry, recalled high hopes before the *Deepwater Horizon* explosion. The spill prevented these possibilities from being realized, compounding the crises facing Vietnamese and other Gulf of Mexico commercial fishers in the 2000s (Marks Field notes, 2011).

Along with residential and community structures Vietnamese-owned businesses, concentrated in ethnic enclave communities, were damaged by Katrina. In recent years, some of these businesses have built back, but the out-migration of residents to higher ground has reduced their customer base. A clerk at a family-run Asian grocery in New Orleans East described in mid-2011 the decline in business and community life following Katrina and then the BP oil spill:

The people we see in the store are the old people, the young people aren't [living here] any more. The old people can't go anywhere, they have to stay here but the young ones are leaving to find jobs in other states and they only come back for holidays to visit when they buy a lot of here but only at those times.

We haven't seen business improving or getting better this year so far but it should be better now because this is when the fishermen should be going out. Back before Katrina, this area was *booming*, you'd see so many people around and people would buy a lot [of groceries] at once, like once a week, but now they just buy a little at a time, just what they need that day. After Katrina around here in New Orleans East after 7:00pm this area is *dead*, nothing's open but it didn't used to be like that – we used to have a Wal-Mart, Methodist Hospital, that's why people are moving away and I just hope we don't have another hurricane this year because that might be it for us.

My family opened this store back in 1986 ... For Katrina, we got 1 foot of water here and roof damage and it took us three years to reopen. The store is now smaller because so many people, especially young people, moved away after Katrina. After the storm we only have family working [at the store], before we had hired employees. And now the oil spill has reduced the business again, we're not able to hire anyone and we've lost about 50% of our business – the normal customers are still coming but not spending as much, especially the fishermen (BM563 2011).

Vietnamese churches, Buddhist temples, and civic groups also slowly rebuilt following Katrina, providing crucial material support to the community and a visible symbol of community solidarity and recovery (Leong et al. 2007). In New Orleans East, the Mary Queen of Vietnam Community Development Corporation (MQVN CDC) was founded following the successful

blocking of a demolition waste landfill next to the Versailles neighborhood (Eaton 2006; Chiang 2009). MQVN CDC became an important social service and advocacy organization for commercial fishermen, Vietnamese and not, after the BP oil spill (MQVN CDC 2011), as would Boat People SOS (BPSOS 2011), a national Vietnamese-American non-profit that opened offices in New Orleans, Biloxi, and Bayou La Batre, after Katrina demonstrated the severe need for assistance and advocacy in Southeast Asian communities in all those places (Juhasz 2011:155).

Many Vietnamese who are U.S. citizens or whose primary residence is in the United States still maintain ties with family and friends in Vietnam, often making visits to Vietnam and sending back remittances to family. It is particularly common for older Vietnamese men employed in the commercial fishing industry along the Gulf Coast to make long trips to Vietnam during the slow winter season. A shrimper in Buras, Louisiana spoke with a project fieldworker while repairing his captain's boat in the Empire shipyard where he used to have a boat of his own, before that was destroyed by Katrina. He noted that he lived mostly on the boat during the shrimp season because he works in Louisiana half the year and returns to Vietnam, where his wife and child are year-round, the other half. He explained that he first lived in America in Minnesota but found the weather there too cold and fisheries work lucrative, so he moved his family back to Vietnam and has rotated between the Mekong and Mississippi Deltas yearly for the past dozen years (BM496 2011).

4.6. HISPANICS

Preetam Prakash

Large scale Hispanic migration to most communities in the study areas dates to the 1990s and 2000s. Though often referred to by residents and the media as "Mexicans," the coastal Hispanic population includes people from throughout Central and South America, as well as U.S. citizens with ancestors from those regions. Anthropologist Shana Walton (2008) refers to the population as Latino but notes: "This label is a problem, though, because it lumps together people from very different countries, continents and ethnic groups. For example, many Native Americans from Mexico, Central and South America become "Latinos" when they immigrate to the U.S., but they don't necessarily have Spanish ancestors or even speak Spanish as their first language!" When compared to some other ethnic groups in the region, Hispanic migration to the Gulf Coast has been more fragmented, occurring mostly in response to economic opportunities rather than stemming from particular large scale events, such as the military conflicts of the 1960s and 1970s which brought many Vietnamese, Lao, and Cambodians to the area. In some cases, Hispanics from Honduras, Nicaragua, and other Central American and South American countries have arrived in the United States with refugee status in response to similar broad events, but such migration has generally been limited.

There are a few well-established Hispanic populations in the study communities, perhaps most obviously in Orleans Parish. While Louisiana's Hispanic connection dates back hundreds of years due to years of Spanish control and trade with Latin America and the Caribbean, most Hispanics arrived more recently. Substantial numbers of Cubans and Hondurans began arriving in New Orleans in the late 1950s and early 1960s, and this continued throughout much of the 20th century. Cubans began coming in large numbers after 1959 and the end of the Cuban revolution. Many Hondurans arrived in New Orleans through employment in the United Fruit Company or Standard Fruit Company, both of which had extensive operations in Honduras. Hondurans still

make up the largest Hispanic group in the New Orleans metro area and Honduran grocery stores, restaurants, and other businesses and organizations abound in many New Orleans neighborhoods (Fussell 2007; Euraque 2004). In some areas of south Louisiana, Hispanics have worked in various sub-sectors of the commercial fishing industry and in fabrication and shipbuilding for several decades (Donato 2004).

Hispanic populations in areas of south Louisiana such as Houma and Morgan City grew during the 1990s as a result of labor demand within these industries. Hispanic migration to each community followed particular trajectories, with employers and informal networks of friends and family playing different roles in facilitating entry to these areas. Such in-migration brought changes in the demographics of individual communities and the region. Great community-level variation exists regarding the extent to which the Hispanics have become integrated into the broader society, their living conditions, and the relationships between them and their employers (Donato 2004).

Hispanics who had lived in these areas prior to the 1990s commonly talked about being among the only Hispanics in the vicinity before the latter part of 2010. In places such as Biloxi and Gulfport, Mississippi, Hispanics arrived in relatively small numbers in the early to mid-1990s to do construction work related to the influx of the large, corporate-owned tourism businesses, including casinos, condominiums, and hotels. During the late 1990s, larger numbers of Hispanics began migrating to the study areas to work in seafood plants, and in shipyards and fabrication shops. A few large seafood plants began regularly bringing in Hispanic workers, mostly from Mexico, on guestworker visas around the late 1990s and early 2000s to address labor shortages tied to the departure of Southeast Asians from the industry. The gaming industry also brought in Hispanic guestworkers during the early 2000s.

The 2005 hurricanes prompted substantial Hispanic in-migration to affected areas for the construction and cleanup jobs which were widely available afterwards. Hispanic welders and other skilled workers also arrived for jobs in coastal shipyards and fabrication shops that were experiencing a typical post-hurricane “boom” after those storms (see Chapter 4, Volume II). In some areas, such as Pascagoula, Mississippi, large numbers of workers from Puerto Rico were hired to work on military vessels. Some scholars, such as Donato (2004) and Blue and Drever (2008) have documented how Hispanics arriving in various coastal locations could draw on specific networks based on a common place of origin and other factors to secure work. In some areas such as New Orleans, for example, the arrival of these new workers, many of Mexican background, into areas that had been home to relatively few Mexicans, shifted Hispanic demographics (Blue and Drever 2008).

Some activists and scholars argue that newly arrived Hispanic workers who were unfamiliar with the Gulf Coast, and often non-English proficient and undocumented, were particularly vulnerable in the post-hurricane labor environment (Donato and Hakimzadeh 2006; Lydersen 2005; Oxfam 2007). Following Hurricane Katrina in 2005, this situation led to the formation of a few non-profits in the study communities, particularly in Harrison County and Orleans Parish, which provided assistance to Hispanic workers with regard to labor disputes and other issues. Pre-existing non-profits and religious organizations sometimes also attempted to provide these types of services.

The availability of post-hurricane construction and cleanup work had largely declined in the region by 2007–2008. Some Hispanics who stayed in the area turned to work in local seafood plants, restaurants, casinos, and domestic service, and also continued to enter the shipbuilding industry. Others found work as deckhands on shrimping vessels. Very few Hispanics in the study

communities owned fishing vessels and none were reported to own unloading docks or seafood processing plants. Many shipyard and seafood plant owners in the study communities reported that they had begun to employ larger numbers of Hispanics following the hurricane and the dispersal of parts of their traditional workforce. As reported in others studies in the region that examine migration (Austin and Crosthwait 2013; Donato 2004; Moberg and Thomas 1993), business owners commonly voiced opinions about the specific abilities and work ethic of workers based on their ethnicity. Owners were generally positive about Hispanic workers, extolling their work ethic and their willingness to perform tasks which, the owners held, local whites and blacks would not do.

Seafood plant owners, in particular, also described the growing number of Hispanics in their workforces as a “normal” process; many communities in the region have a history of new migrant ethnic groups starting out in the local economy by working in the seafood plants and eventually moving out and being replaced by more recent arrivals. Seafood plant owners noted that the Hispanics had replaced Southeast Asian workers who had provided an important portion of their labor force since the 1970s but who were beginning to leave the plants in the 1990s and 2000s due to age, or who were finding other employment, particularly because of increased education among the younger generation.

Along with the decline of the post-hurricane cleanup and construction economy in 2007–2008, residents and business owners in several study areas noted a marked increase in the incidence and scale of immigration raids, both along the Gulf Coast and nationally, which often targeted Hispanic workers. A series of high profile raids in areas such as New Bedford, Connecticut, Postville, Iowa, and Laurel, Mississippi (Abraham 2007; Associated Press 2008; Nossiter 2008), were matched by less public raids at Port Fourchon and in Larose around the same time, and residents reported increased tensions between Hispanics and other local residents in the study communities (Austin, Field notes 2011). Also impacting Hispanics in the mid-late 2000s were the general increases in border enforcement and the strengthening of immigration laws and regulations following the 9/11 terrorist attacks (Nafziger 2009), as well as the specific implementation of new security measures, such as the Transportation Worker Identification Credential (TWIC), required of all workers requiring unescorted access to secure areas of facilities and vessels regulated under the Maritime Transportation Security Act (MTSA) of 2002.

In the years following Katrina, a substantial Hispanic business infrastructure developed in many coastal communities including Gulf Shores, Alabama, Biloxi, Mississippi, and Houma and Morgan City, Louisiana. Grocery stores and restaurants predominate, but businesses also include hair and beauty salons, legal and tax assistance, and translation services. Restaurants sometimes specialize in the cuisine of a particular region or country but, in general, Hispanic businesses market to this ethnic group as a whole. For example, grocery stores typically feature a range of goods from across Latin America. Grocery stores also generally provided cash transfer services, international calling cards, and other services commonly used by people with family members living outside the United States. In areas with a large number of seasonal Hispanic guestworkers who work in local seafood plants, shipyards, and tourism businesses, the customer base of these establishments can fluctuate significantly (Austin Field notes, 2011).

Despite the increasing visibility of Hispanics in the local economy, few religious institutions, non-profits, or other organizations are specifically dedicated to serving this community. No predominantly Hispanic churches exist in the study communities, though many Hispanics regularly attend services, and sometimes constitute significant portions of worshippers at majority Anglo or Cajun churches where Spanish language services are often provided on

certain days of the week. At the time of this study, no organizations or non-profits in the study area were centered exclusively on Hispanics from a particular place of origin. Of the few Hispanic-centered non-profits established following Katrina, some lasted only a few years and had largely stopped operating by 2010. Others continued to provide services but these operations were challenged by decreased budgets and a Hispanic population increasingly fearful in the face of growing anti-immigrant rhetoric and stricter law enforcement (Prakash Field notes, 2011). Although many study communities are ethnically diverse and receive undocumented migrants from many parts of the world, the media and even billboards served to reinforce the link Hispanics and undocumented migration.

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CHAPTER FIVE: BAYOU LA BATRE AND MOBILE COUNTY, ALABAMA

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Bayou La Batre, located in Mobile County on the Alabama Gulf Coast, has long been recognized for its fishing and shipbuilding industries (Figure 5.1). This chapter provides the historical context for this community and study area and the contemporary circumstances that influenced how the *Deepwater Horizon* disaster was experienced there.



Figure 5.1. Map showing Mobile County and Bayou La Batre, AL
Source: Ben McMahan

5.1. MOBILE COUNTY HISTORY

At the arrival of the first European explorers, the area that was to become Mobile County was inhabited by Creek and Choctaw Indians, and the name Mobile itself is derived from a Native American word. Following exploration by the Spanish in the early 1500s, a French fort was founded at Mobile in 1702, laying the groundwork for Alabama’s oldest city (Hamilton [1901] 1976).

From the early days of European settlement, the economy of northern Mobile County has been primarily agricultural, while proximity to the Gulf has given seafood and shipbuilding a significant role in the coastal economy. Mobile developed into a center of international sea trade and a focal point of local land-based commerce. A slave-based plantation economy did not develop in the area Mobile was incorporated into the United States following the War of 1812 (Thomason 2001). Mobile became an important cotton port and the largest slave-trading center in Alabama - the last ship carrying African slaves to the United States docked just north of the city in 1860 (Hudson 1976; Diouf 2007).

Following the post-Civil War stagnation of the plantation economy, the region developed strong timber and chemical industries. Northern Mobile County remained largely agricultural, but its coastal seafood industry became more integrated with distant markets as canneries developed and railroad links allowed its produce, primarily oysters, to be marketed in northern cities (Durrenberger 1992). In the early decades of the 20th century, the City of Mobile saw significant growth of its population and its seaport, and developed into an industrial city.

World War I brought challenges by disrupting the international trade networks of which the city was part. Local shipbuilders received government contracts and new yards were created, but these activities were limited by labor shortages. Between 1918 and 1928, expansion of Mobile's port facilities and the establishment of new shipping companies increased trade and attracted industry to the area (Phaneuf et al. 2013). In south Mobile County, subsistence fishing was still widespread, small-scale commercial seafood production remained the primary source of income, and retail and entertainment outlets were few. The City began to draw increasing numbers of people from this area, both as employees and consumers, a situation which has continued into the present (McLaurin and Thomason 1981; Durrenberger 1992).

The Great Depression weakened trade and industrial opportunities but World War II brought economic revival and job growth. The war years witnessed the construction of Brookley Air Field, an upturn in military and civilian shipbuilding contracts, and increased metal processing for aircraft construction (Alabama Department of Archives 2009). The demand for labor opened employment opportunities to African Americans and white women, groups that had been excluded from industrial jobs until that time. These changes gave rise to tensions that culminated in a race riot at the Alabama Drydock and Shipbuilding Company yard in Mobile in 1943 (PBS 2009).

Following the war, many local businesses engaged in wartime construction experienced steep downturns but this was counterbalanced by growth in specific industries, such as the chemical industry, and development of the interstate highway system which improved access to markets for businesses in general. Shipbuilding grew from the 1950s to the 1970s, tied mostly to military and offshore oil contracts in the City of Mobile and initially to commercial fishing but increasingly to oil and gas in south Mobile. In the early 1980s, overexpansion of the shrimping fleet in conjunction with the subsequent oil industry downturn led to the closure, downsizing, repurposing, or diversification of many shipyards in the area.

Following the collapse of the governments of South Vietnam, Cambodia, and Laos in 1975, hundreds of thousands of refugees fled those countries, some resettling in Mobile County in the late 1970s and early 1980s through the efforts of Catholic Charities and state and federal governments. Over the following years, these newcomers were joined by other Southeast Asian immigrants, including family members of those already in the area and people seeking entrance into maritime based occupations.

In the 1990s and 2000s, the City of Mobile became involved in the aerospace industry, increased its participation in the oil and gas industry, and developed its tourism sector. Efforts to attract industry included construction of a ThyssenKrupp steel processing facility in north Mobile County (ThyssenKrupp 2012; Underwood 2009). Shipyards throughout the county went through a period of expansion, and new yards were built. This growth was driven by contracts related to offshore oil and gas development, military construction, and the building of recreational and ferry boats.

As with other coastal locations, south Mobile County has weathered the powerful hurricanes and storms characteristic of the region. Most recently, Hurricane Katrina caused significant damage in Dauphin Island, Bayou La Batre, Coden, and other nearby areas. The City of Mobile experienced flooding and road closures. At the time of this study, the City had made an almost complete recovery and the majority of work in south Mobile County had been completed, although some rebuilding was still underway.

Mobile remains the largest city in the county and the center of its retail, medical, and educational services. County residents also travel east to Baldwin County and west to Biloxi and Pascagoula, Mississippi, for services and entertainment. Outside the City of Mobile, Mobile County is predominantly rural. Many towns in south Mobile County serve as bedroom communities for Mobile, the Theodore Ship Channel, and Pascagoula. However, Bayou La Batre and its surrounds maintain a strong concentration of industry mainly revolving around commercial seafood and shipbuilding. This area has long depended on marine resources and maritime industry. In this sense, there exists considerable continuity between past and present in south Mobile County.

5.2. BAYOU LA BATRE AND ITS ENVIRONS

The city of Bayou La Batre and the unincorporated communities of Coden and Irvington are small, rural communities largely economically dependent on a mix of commercial fishing, seafood processing, and shipbuilding and marine fabrication. Bayou La Batre, in fact, is referred to by locals as the “Seafood Capital of Alabama” and its fishing vessels are known worldwide. Made famous by the movie *Forrest Gump*, Bayou La Batre was also involved with Hollywood when the local Steiner Shipyard built a pirate ship for Disney’s *Pirates of the Caribbean: Curse of the Black Pearl*. Though Coden is unincorporated, its residents have a strong sense of civic identity and an active community center. Many local fishermen reside in Coden and many of the area’s smaller seafood processing operations are located there. Irvington contains a mixture of agriculture and seafood processing activity. Several companies involved in the oil and gas industry are also located there. Many Southeast Asians, especially Lao, Cambodians, and Thai, live and have their places of worship in Irvington. In 2010, the Bayou La Batre CCD was home to just over 10,200 residents of which 2,558 lived in Bayou La Batre (U.S. Census Bureau 2010). These communities have average educational attainment and per capita income levels below the state average. Bayou La Batre is home to two clinics that offer primary health care, and one dental office. For more specialized procedures the nearest hospitals are located about 17 miles away in Mobile. The closest institutions of higher education are in Pascagoula, Mississippi.

The desire of residents to enter the locally dominant industries has changed over time. Prior to the 2000s, children of fishermen commonly dropped out of high school to work in the seafood business and help their families or to go into shipbuilding (Phaneuf et al. 2013). While

dropout rates in the area are still high, a weakened seafood industry and increased educational opportunities have made continued education and employment outside the area more attractive to many families and their children. Nevertheless, shrimping and fishing, in particular, are highly esteemed by some local residents because of the role these activities have played in the community's history, and because they allow an individual a great deal of personal freedom, and the opportunity to be self-employed and to work outside, with all the pleasures and challenges that these opportunities bring. The continued importance of these traditional forms of work is exemplified in the symbolic and cultural role that the seafood industry plays in local community life. For example, the annual Blessing of the Fleet ceremony marking the start of the brown shrimp season is among the area's largest public events. Held at the dock behind the Catholic church in downtown Bayou La Batre, the event draws a substantial crowd of locals and non-locals. However, some recount much larger crowds and assemblies of boats in decades past and see the ceremony as a sign of the industry's decline.

Historically, local social networks made for easy entry into the local shipyards and processing plants; workers and managers alike followed in their fathers' footsteps, or those of other family members. For example, Joseph Rodriguez (2008), a local shipbuilder, remembered entering the industry because of his father: "That was how we had the idea to build the first boat, he had more work than he could do, he owned a small piece of property and offered to my brother and I that we could build a boat that he had a contract for, it would be our boat, we got the profit, but he helped us get it set up and going." Shipbuilding is still considered to be a potentially profitable option, particularly for yard owners, but employers argue that younger generations avoid it, in part because they see it as dirty and dangerous.

Seafood processing offers an opportunity for people with limited skill sets, but it is not the first choice for those who can move into more economically rewarding and less strenuous positions. The growing service sector in Mobile offers more comfortable, if less profitable, options. Construction, offshore work, and work in the petrochemical industry are also plausible alternatives because they are seen by local residents as well paying, safer, and cleaner than the seafood or shipbuilding industries (Phaneuf et al. 2013). Higher gas prices since the late 2000s may have constrained employment options. Many local residents and employers have noted a decline in the distances that people are willing to commute although the scale and durability of this trend remains unclear. Alabama's "French Coast"-- Bayou La Batre, Coden, and Irvington-- is ethnically and religiously diverse. These communities are home to whites, African Americans, Southeast Asians, and Hispanics and to Catholics, Protestants, Buddhists, and Unification Church members. All these religious denominations have religious centers in the area. Of particular importance to understanding this area is: the local reliance on maritime resources, Bayou La Batre's role in the regional maritime economy, the importance of social networks in resilience strategies, and relations between this rural area and urbanized Mobile in northern Mobile County. While the Alabama coastline may be small, the Bayou La Batre area is a center of Gulf Coast seafood processing (Figure 5.2). The community's reliance on seafood is expressed in an oft-told local joke about a school child informing his teacher that the four seasons of the year are "Oyster, crab, fish, and shrimp." Despite the area's low population and population density, its social networks are many and complex, resting on such foundations as kinship, ethnicity, occupation, religion, and non-profit organizations. Local residents take pride in their self-sufficiency and deep communal ties.



Figure 5.2. Map of southern Mobile County, compiled from ethnographers' notes
 Source: Ben McMahan

5.2.1. Historical Narrative

Bayou La Batre was founded in 1786, making it the first permanent settlement in southern Mobile County. Nearby Coden Bayou was originally named “Coq d’Inde,” the French word for turkey (Hamilton [1910] 1976). Shipbuilding developed early with locals building wooden boats for themselves, but it only achieved prominence as a local industry in the second half of the 20th century. During the late 1800s and early 1900s, Coden and Bayou La Batre

emerged as popular tourist destinations, catering to residents of Mobile who wished to engage in sport fishing and to stay at hotels along the coast. Some African Americans moved into the area to work in tourist-related jobs (VP019 2007). This changed in 1906 when a hurricane destroyed the community, its tourism infrastructure, and the railroad connection to Mobile. The area's tourism was soon limited to sport fishing which, itself, declined over time (Galliard et al. 2008:4). Bayou La Batre and Coden were home to a series of artist colonies between the 1930s and 1950s where artists sought inspiration from the seaside and bayou landscapes (McRoy and McRoy 2007).

Since the earliest European settlement, local families obtained food by fishing, shrimping, crabbing, oystering, and hunting and also cut and sold timber. Until the late 19th century, fishing was largely for subsistence, but seafood canning technology, the completion of the local railroad, and the introduction of ice manufacturing plants in the late 1800s created new business opportunities and jobs, and provided fishermen with a wider market (Seacat 2007:20). Seafood factories employed local and itinerant whites and African Americans and men, women, and children (Seacat 2007). During the 1920s and 1930s, particularly, some African Americans from sharecropping areas relocated to Coden seeking a better living (Galliard et al 2008).

In the 1950s, the shrimping industry in the Gulf of Mexico expanded (Durrenberger 1992). The switch to larger, steel shrimp vessels made possible year-round shrimping and a continuous supply for processing plants, though many fishermen continued to shrimp, oyster, fish, and crab only parts of the year. Often individuals in the seafood industry were connected by family or long association. Seafood brokers supplemented the local supply with catch brought from elsewhere for processing, ensuring year-round operations. This created a need for year-round employees in the processing houses with additional temporary hires during peak shrimp season. By 1988, Bayou La Batre was seventh in the nation for seafood landings, had 534 shrimp vessels operating out of its port, and local shrimp packing plants had 1,153 employees, more than the city's adult population that year (Graham et al 1988:5; Moberg and Thomas 1993; Thomas and Formichella 1987). Fishermen commonly spoke with considerable nostalgia about the 1970s and 1980s, which many described as a halcyon period for the industry. A commercial shrimper observed:

[In] 1979 we had a pretty fair crop of shrimp, but the demand got to be really great, price got phenomenal for that year or for that time of year, that part of the century [Chuckles]. We'd never seen prices like that. Like, for instance, we got a 9-12 shrimp, which was large, in '78 we were getting two fifty a pound, '79, we got four dollar a pound... I'd say the latter '60s, through the '70s, through '85 was probably a real boon for the shrimping industry. And very few people got out of it at that time. Some, but very few. And then imports started taking its toll on the shrimpin' industry. (PP566 2010)

The growing use of large, steel hull vessels made it increasingly difficult for fishermen to build their own boats. Federal legislation such as the United States Fishing Fleet Improvement Act (P.L. 88-498) also made purchasing boats from U.S. shipyards more financially viable. In combination with contracts from the offshore oil and gas industry, this led to a boom for local shipyards in the 1960s and 1970s. Coinciding with the rising importance of the offshore oil industry in the area, some local fishermen began to diversify their earnings by working seasonally or occasionally as offshore vessel (OSV) captains and crew. Bayou La Batre and Coden reached a peak of over 30 shipyards in the late 1970s and early 1980s (Phaneuf et al.

2013). The shipyards were owned primarily by local whites, and workers were mostly locals as well, drawn from the pool of white and African American residents in and around Bayou La Batre, Mobile, and Pascagoula. Shipyards were also opened by seafood processing plant owners and the Unification Church, which purchased a number of properties in the area in 1977 (Reid and Starr 1982). When members of the Unification Church first purchased property and moved into Bayou La Batre, initial reactions to the new residents were negative. Over time, however, the church-owned businesses developed positive relations with local suppliers and employees, employing over 400 by the early 1980s, and church members were eventually accepted as productive members of the community.

In the late 1970s, Southeast Asian refugees from Vietnam, Laos, and Cambodia began arriving in Mobile County. Many were resettled by Catholic Social Services, and they were often moved into available public or subsidized housing near jobs which did not require English proficiency. Some Southeast Asian immigrants were resettled directly in Bayou La Batre and the surrounding area. Others were initially resettled elsewhere and moved to the community to join their extended family members, friends, and co-religionists. Southern Mobile County's Southeast Asian communities are distinctive by including several nationalities in considerable numbers: Vietnamese, Lao, Cambodians, and Thai, as well as many "Amerasians," the children of Southeast Asian women and American men who were born in Southeast Asia but, following the end of the Vietnam War, emigrated to the United States in large numbers.

At the time of this immigration, the area's seafood processing industry was experiencing labor shortages as blacks and white women, the traditional workers at these companies, were finding employment opportunities elsewhere (Moberg and Thomas 1993). In 1979, Bayou La Batre seafood plants began hiring Southeast Asian immigrants to fill this void and, since that time, Asian-American women have become the mainstay of this industry's workforce. Their presence in the region and willingness to work the extremely long hours of repetitive labor that is characteristic of the industry has anchored Bayou La Batre as a center of seafood processing for the entire Gulf Coast.

While there were never violent altercations between local inhabitants and newly arrived Southeast Asians, relations have not always been easy, and there are tensions to this day between the communities (e.g. Sayre 2008b). On the whole, however, relations quickly improved following the initial arrival of Southeast Asians, particularly after it was generally acknowledged in the community that this population has brought economic growth to the region through their numbers and work ethic (Galliard et al 2008).

5.2.2. The Downturn of the 1980s to Hurricane Katrina

In the late 1970s, overcapitalization of the Gulf fishing fleet began to reduce demand for shipbuilding. With the 1980s oil crash, many shipyards went bankrupt or closed. During the 1980s and into the 1990s, those that remained shrank and diversified their operation, some moving exclusively into boat repair. Some shipyard workers took jobs at larger yards in Mobile, some took advantage of union training programs at Ingalls Shipyard in Pascagoula and improved their skills, some moved into other kinds of employment.

In the decades following their arrival, Vietnamese, Lao, and Cambodians purchased several crab shops and one unloading dock. Vietnamese began moving into shrimping soon after their arrival, initially as deckhands under white captains and vessel owners but, over time, they

have come to own and operate a major portion of the large shrimping vessels in the area. The numbers of Lao and Cambodian crabbers have also increased over time. Oystering and fishing, however, continue to be dominated by white males. A few privately owned oyster leases still exist in the area.

The continuing settlement of Southeast Asians in southern Mobile County created distinctive ethnic neighborhoods, institutions, and businesses. Vietnamese, Lao, and Cambodian migrants established Buddhist temples and monasteries and Christian churches beginning in the 1980s and continuing through the 1990s and early 2000s. Temples commonly feature architectural styles and forms common to a group's place of origin, observe particular holidays, and support social functions. Christian Southeast Asians attend local churches, like the Catholic Church in Bayou La Batre, where a Vietnamese-language Mass is held weekly, or the Lao Baptist Church in Irvington. Significantly, the heavy reliance of local Southeast Asians on the seasonal commercial seafood and shipbuilding industries has facilitated the maintenance of links between these people and their places of origin. Many local Southeast Asians commonly take extended trips to their native countries during the slow season, which falls in late winter and early spring.

In contrast to the high density of shipyards and seafood operations in the area, there exist relatively few retailers, restaurants, and other businesses. The majority of such local businesses are owned by local whites. Some Vietnamese, Cambodians, and Lao own and operate convenience stores, gas stations, Asian groceries, restaurants, nail salons, billiard halls, and laundromats, both in Bayou La Batre and Irvington. There is one Thai-owned restaurant and two Hispanic-owned restaurants in the area. The few African American-owned retail businesses are concentrated in the personal care and food sectors.

Unlike Bayou La Batre and Coden, Irvington has historically been a strongly agricultural community. However, in recent years it has emerged as the site of several smaller seafood processing operations as well as the area's few offshore oil industry offices and facilities. Also, since the 1980s, a significant portion of local Southeast Asians as well as their retail businesses and places of worship have located in Irvington.

Throughout the 1980s and 1990s, some local fishermen acquired larger offshore shrimping vessels to facilitate longer voyages and many of these were built in Bayou La Batre. The 1990s was another period of transition that saw general economic improvement in the area. The late 1990s to early 2000s was also a time of particularly rapid vessel construction for both the fishing and offshore oil industries, spurred by relatively high shrimp prices, government programs facilitating commercial boat ownership, and the expansion of the offshore industry in the Gulf and globally. In the 2000s, though, many shrimpers were driven out of the industry by high diesel prices, low shrimp prices, a growing volume of cheaper imported shrimp, and new government regulations. Shrimp processors were also impacted and a few closed their doors during the 2000s. In 1999, Bayou La Batre, Mobile County, and other surrounding areas joined Project Impact, a Federal Emergency Management Act (FEMA) program aimed at increasing their post-hurricane resilience (FEMA 1999).

Whites, Vietnamese, Cambodians, Lao, and African Americans, primarily men, all work in the local shipbuilding and fabrication industry. In the late 1990s and early 2000s, many younger Southeast Asians were moving into other occupations, causing labor shortages in shipbuilding and fabrication and seafood processing industries, and leading some area companies to supplant their local and regional workforce with guestworkers hired on H-2B temporary visas (Phaneuf et al. 2013). Some owners established long term relationships with their H-2B workers,

who were largely from Mexico and Central America, hiring same employees year after year. Some experimented with the H-2B process and found it too costly and rigid to suit their needs. Speaking in 2011, an oyster plant owner discussed the bond which had developed between him and some of his H-2B workers:

I travelled to Mexico with my family to visit some of my Mexican workers a few years ago. They asked us to come down. Some of the workers have been coming to the plant to work each season for many years and they are like family. My family and I travelled through Tabasco and other places along the eastern coast because a lot of our workers are from Tabasco (PP1010 2011).

A small number of Hispanics also began to work locally as deckhands on shrimpboats, and boat captains also occasionally have hired H-2B visa workers for these positions. When Hurricane Katrina hit the area, the local shrimping fleet had declined significantly from the late 1980s and was down to 300 boats (Mitchell 2009).

The early 2000s also saw the development of a plan to remake Bayou La Batre into a tourist destination revolving around the opportunities for sport fishing and pleasure boating. A non-local developer and some local residents were intent on building tourist infrastructure in the town, including waterfront condos and marinas. Some residents and business owners saw this potential economic change as positive, following the shift of some coastal towns in Florida and elsewhere away from commercial fishing and towards tourism. Others perceived the proposed development as a direct threat to their way of life and their businesses. As one local noted, “We don’t want outside developers. The community should choose what goes where. This is a fishing village and it’s not gonna change. We want improvement, not change of category” (VP019 2007). However, in 2005, before such conflicts could be resolved, Hurricane Katrina struck the Gulf Coast and put at least a temporary end to any prospects of tourism development.

5.2.3. Hurricane Katrina and the pre-*Deepwater Horizon* Disaster Social and Economic Landscape

Hurricane Katrina had a devastating impact on the study communities. The majority of historic downtown Bayou La Batre was destroyed during Katrina or condemned afterwards. As of 2007, an estimated half of the city’s buildings had been or would have to be destroyed due to hurricane damage (Seacat 2007:29). This included the majority of the retail establishments and a local medical clinic. Some establishments had still not been rebuilt at the time of this study, though much of the commercial rebuilding and reconstruction had come to an end by 2008.

The hurricane destroyed 500 of the 769 houses in Bayou La Batre and the city suffered a significant out-migration (Sayre 2008a). Of those who remained, some were uninformed of available grants and other funds, or had difficulty filling out the necessary paperwork before established deadlines. As of 2010, some of these individuals remained in storm-damaged houses (McMahon 2011). In 2011 most had not fully repaired or rebuilt (Equity and Inclusion 2011). Some individuals that did rebuild later discovered that their properties no longer met insurance requirements (Sayre 2008a). Bayou La Batre received an Alternative Housing Pilot Program (AHPP) grant to build a housing development for hurricane survivors. Implementation began in 2007 (Abt Associates Inc. 2009) and by July, 2009, 100 houses built under the program were

occupied. At the time of this study, some locals continued to express concern that the location of the new housing development north of the city had diluted community ties, significantly altered its maritime character, weakened business client relations, and created commuting difficulties for people who worked along the bayou (see also Phaneuf et al. 2013). Many displaced residents found moving back to town difficult because of increases in insurance prices and housing elevation requirements (Phaneuf et al. 2013) which was reflected in the local real estate market: in 2008 housing rentals were in demand but the only waterfront property in high demand were lots that could be used to expand shipyards and seafood operations (VP012 2008).

Following Katrina, Bayou La Batre received FEMA and Department of Housing and Urban Development funds to assist in rebuilding, as well as volunteer aid. Unincorporated Coden lacked the necessary administrative capacity to apply for this funding, and the South Bay Communities Alliance was formed shortly after the storm to provide a voice for this community and for other unincorporated communities in the area. Hurricane Katrina and its aftermath resulted in a great increase of local, regional, and national non-profit and religious organization activity in the area. Many such groups, for example Providence Hospital and Lutheran Services, were based in Mobile, a situation that contributed to an often expressed concern that the storm had increased the dependency of south Mobile County on the City of Mobile. Irvington and areas further north of Bayou La Batre were largely spared the same level of destruction and the subsequent influx of social service providers.

The formal organization of the area's ethnic groups changed to some extent following Katrina. Boat People SOS, a national Vietnamese-American social service and political advocacy non-profit organization, established an office in Bayou La Batre following the storm. Between Katrina and 2011 when it closed, another non-profit also operated in the area, employing Lao and Khmer speaking caseworkers to provide assistance to low-income Lao and Cambodians. Post-Katrina, no formal organizations emerged in the focused on other ethnic groups. Due to low levels of English proficiency among many of the migrant groups, English-as-a-Second-Language (ESL) classes are provided at the local community center and regularly draw members from most local ethnic communities.

As in much of the Gulf region, workers in the area's principal private industries are not represented by labor unions. However, several organizations tied to local industry do exist including the Shipbuilder's Consortium, the Organized Seafood Association of Alabama, and the United Seafood Association. These groups play several roles, for example, representing local business interests on state, regional, and national levels and advertising to promote local industry. Following Hurricane Katrina, fishermen's associations also interacted with federal government agencies to determine payments to local fishermen, and they played a role in facilitating various post-hurricane projects including the rebuilding of hurricane-damaged oyster reefs. While some locals were very active in these associations, others expressed doubts about their effectiveness and benevolence. On the whole, the local shipbuilding and seafood industries tend to rely more on informal than formal networks.

Several education and advocacy groups also operate in the area. One example, the Working Waterfront Coalition, is an alliance of local stakeholders interested in maintaining public access to waterfront space in the face of growing private ownership and post-Katrina shortages of public docks and other infrastructure (Petri 2008). Ongoing involvement of Mobile non-profits in south Mobile County has troubled some locals who feel that outsiders do not understand and cannot respond to their needs. Local dependence on Mobile for income, goods and services adds to such tensions. Some in the area argue that these dependencies increased

substantially after Katrina destroyed local businesses and infrastructure, while others welcome this non-local involvement and describe Hurricane Katrina as having made community residents aware, for the first time, of their rights as citizens to rebuilding assistance, healthcare, and other social services.

Shipyards suffered damage and delays in contracts due to Hurricane Katrina but such setbacks were not significant to cause yard closures. All shipyard owners reported that they had fully recovered by 2008 (Phaneuf et al. 2013). The hurricane also benefited shipbuilding industry to an extent since damaged vessels required repair. As of 2009, Bayou La Batre and Coden had 12 shipyards, two focused entirely on repair (Phaneuf et al. 2013). The yards remaining in construction had a number national and international client bases spanning the fishing, offshore oil and gas, brownwater transportation, and pleasure industries. Some focused on one type of client or industry while others were more diversified. In early 2008, all local yards were booked full, some for a number of years, but the dramatic increase in both steel and gas prices in the summer of 2008 had a significant impact on those yards without escalation clauses in their contracts.

The commercial seafood industry took longer to recover from Hurricane Katrina than did the yards (Table 5.1). One estimate counted the initial economic losses of the Alabama seafood industry at \$112.25 million (Chang et al 2006). Processing plants suffered heavy material losses, and not all of the smaller plants were able to reopen. The shrimping industry continued to experience the negative impacts of high diesel prices, low shrimp prices, and the influx of cheap imports. The storm reduced the number of local boats in the shrimping industry from 300 to 200 (Mitchell 2009). Additionally, the loss of dock space limited local and regional landings sites (VP040; Chang et al 2006). The “Katrina Cut,” a gap in nearby barrier islands that allowed saline water to pass into local waters, was said by many to have had a particularly pronounced impact on local oyster reefs. However, federal government funding to rebuild the reefs provided some work to local fishermen over 5 years (NOAA 2007). Those who managed to stay in the commercial seafood industry after the hurricane generally held that, each year, the industry had improved, although they argued it had not recovered to pre-storm levels. They also thought that, without the storm, 2010 would have been shrimpers “comeback year.”

Growth in the years following Katrina led both local shipyards and seafood plants to turn increasingly to Hispanic migrant and H-2B workers. At the time of this study, the seafood industry continued to be divided along ethnic lines, with local whites owning the majority of the plants and Hispanics and older Southeast Asians constituting the majority of the workforce. As in the past, the local processing plant workforce continues to be relatively mobile, with the majority of workers moving from one processor to another in accordance with the season and level of work available. H-2B workers, however, are under greater restrictions regarding their movement. While some Southeast Asians have moved into crab plant ownership, currently no seafood plants in the area are owned by Hispanics.

Compared to oystering, shrimping, and crabbing, the local fin fishing industry is relatively small. Between 30 and 40 fin fishermen operate out of the area and gill net fishing is still permitted in the state of Alabama. Local fin fishermen often noted that there were far more people in this sub-sector in the past, and attributed this decline mainly to additional state regulations on the conditions for holding fin-fishing licenses and its policy of “buying out” working fishermen. The first buyout took place in 2008, with a second considered in 2011 as a way to help fishermen exit the industry (Dute 2011a; Raines 2010).

Table 5.1. Landings in Bayou La Batre

Year	Quantity (million pounds)	Value (million dollars)
2011	21.6	43.1
2010	3.1	4.7
2009	21.0	30.0
2008	19.0	36.0
2007	23.0	39.0
2006	28.0	41.0
2005	17.3	28.4
2004	19.1	28.4
2003	18.5	30.8
2002	17.1	27.4
2001	18.0	38.9
2000	23.0	48.9
1999	17.8	40.0
1998	23.6	36.4
1997	12.1	25.8
1996	20.4	28.6
1995	22.1	37.5
1994	18.3	36.7
1993	16.0	24.3
1992	16.2	24.0
1991	14.9	24.6
1990	13.7	20.7
1989	14.9	24.7
1988	12.4	23.8
1987	15.1	29.8
1986	25.6	43.3
1985	21.0	30.4
1984	18.2	31.5
1983	13.6	28.5
1982	17.8	33.8
1981	25.0	31.4

Source: NMFS n.d.

Before the oil spill, 25 seafood processing plants were operating in Bayou La Batre, Coden, and Irvington. While local harvests are relatively small compared to regions of Louisiana and elsewhere, for much of the Gulf Coast Bayou La Batre holds considerable significance in its role as a processing center. This role was magnified by Katrina and the destruction of seafood processors elsewhere along the Gulf. For example, after the storm and the loss of local processing plants, many crabbers along the Mississippi Gulf Coast began selling their product to Bayou La Batre processors. All but the smallest processors in the Bayou La Batre area generally

draw a substantial quantity of product from outside of the local area and have long standing relationships with fishermen, docks, and other processors in Florida, Mississippi, Louisiana, and Texas. Some obtain product from the East Coast and foreign countries. Louisiana suppliers are particularly important for many area processors.

5.3. SPECIFIC EFFECTS OF THE SPILL

The oil spill heavily impacted the local area because of reliance on commercial seafood and the shipbuilding and fabrication industry (Table 5.1). The impacts on these industries also “trickled down” to the retail sector. While few physical impacts from the oil spill were reported in the local area, local business owners and workers reported that media coverage of the spill affected perceptions of local seafood and had a significantly negative impact on the local economy.

Many fishermen in the area have ties to other Gulf Coast areas, and impacts to the region’s fisheries were felt locally. Shrimpers operating the smaller inshore vessels generally shrimp in Alabama and, occasionally, Mississippi waters, but captains of larger offshore shrimping vessels commonly range through Florida, Mississippi, Louisiana, Texas, and federal waters. These vessels will occasionally travel East Coast waters, particularly when Gulf landings are low. These long trips are, at times, facilitated by family connections along the coast, and create friendships and working relationships that can serve as a buffer against unforeseen problems. Local oystermen who use tongs generally remain in local oyster grounds near Heron Bay, but those with dredge boats operate both in local areas and rely on the oyster season in Pass Christian, Mississippi. Local crabbers mostly operate in Alabama and Mississippi waters. They generally do not venture west of Jackson County, Mississippi but occasionally go as far as Bayou Caddy. Local fin fishermen operate in Alabama waters. Local fishermen are also commonly connected to other social networks, for example those tied to the offshore oil industry.

Fishermen and seafood processing plant owners reported being hurt during the summer of 2010 by water closures due to the spill, and by negative media coverage. Because of the spill, many fishermen could not participate in the 2010 brown shrimp season and, instead, attempted to get hired into the Vessels of Opportunity (VOO) program. Following the summer of 2010, all local seafood processors reported low production. Some attributed this to the unwillingness of Gulf Coast fishermen, particularly shrimpers and crabbers, to go fish after the spill because they were working for BP or had claims pending with BP or the Gulf Coast Claims Facility (GCCF). Fishermen who did go out for white shrimp in fall 2010 reported generally low catches. Plant owners also commonly expressed a belief that many customers had been unsure or opposed to buying Gulf seafood during the summer and fall of 2010. While processors generally acknowledged that such attitudes had softened in 2011, customer uncertainty concerning Gulf seafood was still widely reported to be an issue affecting business. Most owners reported the loss of several long standing customers and worried about the difficulty of regaining customers who might have already transitioned to other steady domestic or international suppliers. A manager at a local crab processing plant discussed these issues:

People still don't trust Gulf Coast seafood. We used to deal with six to seven wholesalers before the spill but now we deal with just three and the volume of business that we are doing with these wholesalers is way down. It could be that these people have

turned to imports. Last year when we and the other processors here on the coast couldn't get crabs these customers in other parts of the country had to get crabs from somewhere and lots of them turned to imports (PP936 2011).

The local public oyster reefs were closed throughout the 2010–2011 season. The reefs near Pass Christian, Mississippi were also closed to dredging and a 10-sack limit was imposed on tonging boats. This development hit many local oystermen hard because they generally head to Mississippi to dredge in the course of a normal season. Many oyster processors in the area, especially smaller processors, were closed during the 2010–2011 season due to a gulfwide shortage of oysters.

Due partly to the low number of operators, commercial fin fishermen and fin fish processing plants did not report the same levels of negative impacts as did other local seafood businesses. Fin fishermen and fish processing plant owners did report a degree of negative impacts from media coverage of the spill, although this was also not as pronounced as in other seafood sectors. Both fishermen and fish processing plant owners reported harvesting popular fin fish species at normal levels during 2010–2011.

Unlike in other areas of the Gulf, fishermen and processors did not report much, if any, concern with the Mississippi River floods of spring. In 2011, fishermen reported that the brown shrimp season was poor, but local processors generally attested that their businesses had picked up considerably from 2010. Crab processors reported low production and some processors reported having had to lay off substantial portions of their workforce because of the state of the industry in 2010-2011. In some cases, these developments were directly attributed to consequences from the oil spill. In May, for example, a crab plant owner in the area who employed large numbers of local Laotian residents expressed:

This morning was the first time we processed crabs in 3 weeks. Normally this is a very busy time of the year and we would be working 80 to 90 hours a week, 6 days a week. Lots of my workers have gone back to Laos or they've gone somewhere else. I don't blame them, they need to find work. My workforce is substantially lower than in other years. The people in Louisiana that I get crabs from won't go out. They tell me that there are no crabs out there. Everyone in Plaquemines Parish was working on the VOO program so didn't want to go back out crabbing (PP844 2011).

Both processors and fishermen reported very low catches during the 2011 white shrimp season, with significant uncertainty about why the numbers were so low (see also Dute 2011b). People involved in the crabbing industry also reported decreased production in the summer and fall of 2011.

Following local oyster reef openings in October 2011, most oyster processors and oystermen reported a good season, with oyster prices fairly high. Several oyster processors who had not operated since the oil spill reopened after the reefs were opened. However, the future of the season was still uncertain because people in the industry were unsure how long the local reefs would support harvesting. Related to this was local disagreement on whether more stringent sack limits should be imposed in order to prolong the season. Adding to this uncertainty about the future, the reefs near Pass Christian were closed indefinitely very early on in the season, and Bayou La Batre area oystermen were again unable to oyster there.

Across the Gulf, controversy followed the VOO program concerning who was hired and how much they were paid. The VOO program in Bayou La Batre experienced these issues, compounded by locally specific and pre-existent tensions over favoritism in local government. Commercial fishermen, upset that VOO work was being assigned not to local fishers but to wealthy and well connected non-fishermen from outside the community, staged protests that resulted in arrests in the summer of 2010 (Murtaugh 2010; Altman 2010). The later transfer of the local VOO program oversight to a company connected to Bayou La Batre's mayor also provoked protest among residents and the press (*Mobile Press-Register* 2010). VOO officially ended in Alabama on September 15th, 2010, and very few boats in the area continued to work in any capacity after this.

Those employed as offshore service vessel (OSV) captains at the time of the spill reported heavy impacts following the spill, either because they were put on stand-by or had their shifts substantially reduced. One of two OSV contracting companies in the area also reported a heavy reduction in work following the oil spill. A resident of the area who worked as a boat captain for one of these companies said about this:

I mean you can blame it on whoever you wanna blame it on. You can either blame it on BP, for havin' the spill and the government in putting the sanctions and shuttin' the Gulf down, which is affectin' ME. And eventually MY company's gonna have to lay off...they're holdin' on, thinkin' that they're gonna get these sanctions lifted, they're gonna get the permits, and we're gonna go back to work. That's what everybody's dependin' on. But it's happening, it's gonna be so slow that my company can't maintain. They can't keep payin' 150 people (PP675b 2011).

However, several local companies that operated as labor recruiters and contractors for the offshore oil industry reported being busy with VOO program-related work during the summer of 2010, and stated that business had picked up during 2011.

Local shipyards that focused on commercial fishing boat repair and construction for Gulf boats generally reported significant negative impacts during the summer and fall of 2010, although a few yards were able to get fabrication work related to the oil spill cleanup. During 2011, most local yards still reported low levels of business, although they generally attributed this to the poor national economic climate or the high price of steel and not to factors immediately related to the oil spill.

The moratorium on deepwater drilling was reported to have impacted local yards focused on construction for the offshore oil industry. However, yard owners were divided on the severity and duration of these impacts. Smaller yards with ties to the offshore oil industry reported difficulties obtaining contracts following the spill, often related to the fact that the spill occurred during a down cycle in this industry. The co-owner of a yard moving towards greater involvement in deepwater offshore work prior to the oil spill outlined his company's experience of the post-spill period:

At the time of the oil spill we were planning on moving into deepwater. We were heading in the direction of large offshore related work. We had narrowed things down to one customer. It's like dating. You spend months weeding out different girls and then you settle on one. But then something happens, like the oil spill, and you decide that you need

to go back and talk to the other girls, but you've already told them all that you will busy for at least two years and so what kind of answer will you get from them (PP892b 2011)?

In contrast to this type of situation commonly faced by smaller yards and shops, larger yards were generally able to find new sources of work in other areas of the oil industry or other markets.

Local non-profit and social service activity increased substantially following the spill. Business Support Centers were established in Bayou La Batre and in neighboring Baldwin County. The Center in Bayou La Batre was providing assistance in English, Spanish, Lao, and Khmer at the time of fieldwork for this study. Tax preparation assistance for locals who received BP claims or worked on the oil spill cleanup or VOO program was provided by local accountants through the Center. The Center also assisted local residents with the claims process and registered people for training programs, held locally or in the Mobile area, and intended to provide options outside of the seafood industry. Welding, certified nursing assistant, and commercial truck driver certification were the three areas targeted by training programs, and transportation to program sites was provided. However, caseworkers at the Center reported considerable difficulty during 2010 and early 2011 in qualifying many local residents for available training programs. Caseworkers stated that these difficulties resulted from official qualification criteria which required proof of oil spill impacts, proof that many locals had trouble providing. Low levels of formal education among many impacted local residents, as well as a lack of English proficiency among many Southeast Asians and Hispanics, were also commonly described as impediments to post-spill recovery. For example, lack of a GED or English fluency disqualified local residents from some jobs for which training was available. In the late summer, early fall of 2011, caseworkers at the Center reported improvements in the numbers of local residents that they were able to approve for training programs.

Boat People SOS assisted local Vietnamese and members of other ethnic groups with the claims process and other post-spill processes, and also provided food aid, translation, and tax preparation assistance. In addition to service in Vietnamese, this non-profit began to employ Lao and Khmer speakers. Various non-profits established after the spill also provided crisis counseling in English, Vietnamese, Lao, and Khmer. Continuing operations include a food bank and basic healthcare service. As of 2011, there were no organizations focused specifically on the needs of other local groups, although in Pritchard, Alabama, a majority African-American town nearby, a minister affiliated with the Southern Christian Leadership Conference (SCLC) formed an advocacy organization for oil spill claimants that served many African Americans in Mobile County.

Following historical precedent, many social workers, counselors, and others operating in the area after the spill were based in Mobile. Mobile Baykeeper is an environmental non-profit with the mission of protecting the environment of Mobile Bay and its watershed. Following the spill, Mobile Baykeeper (2009) made practical information about the spill and spill-related programs available on its website, advocated for locals and the local environment with representatives of the national government, and established a Volunteer Field Observer Program to monitor impacts of the spill. Other environmental groups, such as the Mobile Bay National Estuary Program, also served to disseminate information about the spill and post-spill cleanup (Mobile Bay National Estuary Program 2012).

While certain types of social services, particularly psychological counseling, became more readily available following the spill and the influx of BP grant money, some area non-profits in operation prior to the spill reported a decline in funding and cited difficulties providing post-spill services under already strained budgets. One local non-profit that had assisted low-income Lao and Cambodians shut down in 2011 due to a lack of funding, and other local non-profits talked of impending closure. Addressing the needs specifically related to the spill, one individual who had directed a local non-profit since Hurricane Katrina said:

As opposed to after Katrina, after the oil spill most donors have been reluctant to give any money. Most of them consider the oil spill to be BP's responsibility and say that BP should be the one taking care of it. BP themselves have not made any attempt nor shown any interest in working with or funding any of the local non-profits. However, even though new funding is not coming in, we still have to find 3 times the amount of food and supplies because of how many more people are coming in after the spill (PP1022 2011).

Despite these troubles, several non-profits, most non-locally based, continued to operate in the area and provide various services, including food assistance, legal counseling, and healthcare.

Residents in this area also faced problems due to the lack of access to locally-caught seafood. Many locals regularly harvest shrimp, oysters, fish, and crabs for their own consumption, as well as to distribute among family, friends, and other members of their social networks. This practice of subsistence fishing was sometimes described by locals as providing a basic safety net which had seen people in the area through the economic fluctuations common in the local seafood, shipbuilding, and offshore service vessel sectors. Following the spill, many residents were uncertain about, or fearful of, eating Gulf seafood, and this not only affected commercial sales, it also had impacts on local subsistence activities.

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CHAPTER SIX: BILOXI AND HARRISON COUNTY, MISSISSIPPI

Kelly McLain and Preetam Prakash

The Mississippi Gulf Coast comprises three counties, with Harrison County directly in the center (Figure 6.1). This chapter provides the historical context for this region and the contemporary circumstances that influenced how the *Deepwater Horizon* disaster was experienced there.



Figure 6.1. Map showing Harrison County and Biloxi, MS
Source: Ben McMahan

6.1. HARRISON COUNTY HISTORY

With abundant resources, the Mississippi Gulf Coast has historically attracted many groups of people. Native Americans engaged in subsistence hunting and gathering on the Biloxi Peninsula over 14,000 years ago. Over time, various indigenous peoples settled in the area, living close enough to local waters to harvest fish and oysters but far enough inland to minimize risk from storms (Husley 1998). Sieur Lemoyne d'Iberville, a French-Canadian soldier under the commission of the King Louis XIV of France, arrived in 1699 and established the first French Louisiana colonial settlement, which derived its name from a local indigenous group, the Bylocchy, and was located on the site of modern day Ocean Springs. In hopes of stimulating commerce and increasing revenue, King Louis XIV of France instructed colonists “to breed the Buffalo at Biloxi; to seek for pearls; to examine the wild mulberry with the view to silk; the timber for ship-building and to seek for mines” (Claiborne 1880). Within 30 years, the indigenous groups in the area had been greatly reduced in number by interrupted migration and hunting patterns and harsh treatment at the hands of colonists (Claiborne 1880).

The colony struggled to survive in the early 18th century. Plans were made to transport more French immigrants and to establish an African slave trade, but the settlement’s economy continued to decline (Claiborne 1880). New Biloxi, established in 1713, briefly served as the colony’s capital before New Orleans assumed this role in 1722, leaving New Biloxi and the surrounding areas essentially abandoned. After passing under British and Spanish rule, the Mississippi Gulf Coast was incorporated into the Mississippi Territory in 1812 and then into the newly formed state of Mississippi in 1817 (Husley 1998). The Mississippi coastal region was subdivided into Hancock County, which included all of present-day Harrison County, and Jackson County. Between 1806 and 1820, Hancock County’s population grew from 12 French-speaking families to a total of 1,594 people (Husley 1998). Despite these rapid changes, there remained a core population, mostly descendants of D’Iberville’s followers, who preserved the French-Canadian dialect and cultural norms (Claiborne 1880). The inhabitants depended mostly on subsistence fishing and hunting, and agriculture was minimal (The Biloxi Daily Herald 1902). The area’s sandy soil proved unsuitable for large scale plantation agriculture and animal husbandry, and throughout the pre-Civil War period the Mississippi coast had smaller slave populations than other areas of the South (Graham 1861).

The local economy was based on commercial fishing, ship building, timber, and tourism. In the 1820s, wealthy families from New Orleans began building summer homes and cottages along the beachfront. This brought new workers to the area to serve this nascent tourist population. Yellow fever outbreaks in New Orleans in the 1830s increased seasonal visitors to the Mississippi Gulf Coast. Business and political interests lead to the formation of Harrison County in 1841, which was carved out of both Hancock and Jackson counties (Husley 1998). Two different rail systems were in place before the turn of the century and had pronounced impacts on population and business growth. Partly as a result, seafood factories began opening in the 1880s and, by the 20th century, the seafood industry was central to the local economy and culture. Shipbuilding in the area grew in close relation to the seafood industry. During World War I, the area’s shipbuilding industry experienced some additional demand from the U.S. military, which also accelerated timber production (Husley 1998). Tourism continued to be important to the area and gambling grew in Harrison County during the early 20th century

(Nuwer and O'Brien 2006). The Great Depression had precipitous effects on the area. Shrimp prices plummeted, deforestation significantly reduced lumber operations, and development projects came to a halt in the mid-1930s (Harrison County and Ohio State University 2008a). Later that decade, slot machines and gambling gained popularity, and gaming began to draw tourists and workers to Harrison County, although the legal status of the industry remained tenuous. This situation gave rise to conflicts between proponents and detractors of the gaming industry which would continue throughout the 20th century (Nuwer and O'Brien 2006).

The construction of Keesler Air Field in 1941 opened many new employment opportunities for civilians and expanded the local consumer base. Harrison County benefitted from federally funded post-World War II projects, including an expansion of U.S. Highway 90, the completion of the Gulf Intracoastal Waterway between Florida and Texas in 1949, and the construction of a seawall and the world's largest man made beach in the 1950s. These developments facilitated the growth of tourism and also promoted shipping and commerce. Rapid growth polluted local waters and led to the closure of once productive oyster beds as early as 1945. Programs were created to transport oysters from polluted to clean areas, resulting in the quadrupling of oyster production during the 1960s (Husley 1998). However, industrial runoff and other forms of pollution proved to be an ongoing problem and, outside of Pass Christian, no open oyster reefs remain in Harrison County.

When Hurricane Camille hit Mississippi in 1969, the coastline was crowded with antebellum homes, apartments, motels, resorts, restaurants, and retail outlets. The damage was catastrophic, and it took nearly two decades for Harrison County to recover (Husley 1998). While the immediate aftermath of Camille fostered a spirit of cooperation, the policies designed to mitigate future storm hazards were not enforced over the long term (Colton and Giancarlo 2011). During the 1970s and 1980s, the tourism industry attempted to market the area as a family-friendly destination by encouraging the development of non-gaming entertainment and attractions, including the Mississippi Gulf Coast Coliseum and Convention Center, which was opened in 1976. The Coliseum hosted the Miss USA Pageant each year from 1979 until 1982. Communities promoted historic preservation in the area, in part utilizing Urban Renewal Fund monies to restore old buildings (Nuwer and O'Brien 2006). Biloxi began hosting events in 1975 as part of historic preservation week. That same year, Biloxi also began inventorying its historic resources resulting in the first edition of *The Buildings of Biloxi: An Architectural Survey*, published in 1976 (City of Biloxi 2004). Despite such initiatives, the economy remained depressed.

The local seafood industry rebounded with the aid of low-interest government loan programs, although technological advances in refrigeration and transportation made it difficult for local factories without those technologies to compete. The seafood industry facilitated the settlement of Vietnamese refugees in the area during the late 1970s and 1980s, and these refugees came to provide the industry with a new source of labor. Unlike many other areas of the Gulf Coast, Harrison County was only minimally impacted by the growth of the offshore oil industry in the 1960s and 1970s. However, some commercial fishermen began working either seasonally or full time as offshore service vessel (OSV) captains during the 1970s, a pattern which has continued up until the present.

Generally poor economic circumstances led to the passage of the 1990 Mississippi Gaming Control Act, which legalized gambling in coastal counties based on voter approval there. The following year, Harrison County voters approved dockside gambling and casinos, attracting national casino developers and corporations to the area. Gaming was soon generating

millions of dollars in local tax revenues, and providing a major new source of employment. The industry began with riverboat casinos but rapidly evolved to more luxurious barge-based facilities. By the late 1990s, many casinos had built resorts featuring hotels, theaters, restaurants, and spas. The development of high rise condominiums and other tourism-related infrastructure and businesses accompanied casino development. These changes gave rise to local advocates and detractors.

Beachfront development continued at a brisk pace until Hurricane Katrina struck the Gulf Coast in 2005. The hurricane caused massive damage and substantially altered existing demographic and economic patterns in the area. For example, large numbers of Hispanics arrived to work on the recovery and cleanup and particularly strong concentrations of Hispanics and Hispanic businesses emerged in Biloxi and Gulfport. Also entering were volunteers and non-profit workers who often remained after their initial projects were completed, establishing Harrison County as an important center for non-profit activity along the Gulf Coast.

On the other hand, many left the area following the hurricane. While some relocated far away from the coast, others settled in areas nearby to the north, such as the town of D'Iberville. During the study period, many people in the area argued that post-Katrina beachfront development has been limited and that the area has remained a shadow of what it once was. Many locals reported that the area experienced steady economic growth for a few years following Katrina as a result of the presence of cleanup workers and personnel, but the departure of many of these people around 2008 marked an economic decline, which was further reinforced by the national recession and generally held to have only begun turning around in the early part of 2010.

The physical destruction of many prominent landmarks and sites during Katrina added to local concerns about culture loss which had been raised by the growth of the gaming industry. In some ways, the conflicts and compromises that casino development and the responses to Katrina have engendered are in keeping with historical patterns in the area in that local residents have long had to reconcile a number of economic and social interests and perspectives. The history of the city of Biloxi, the traditional heart of the area's seafood and tourism industries, encapsulates and sheds light on these and other issues.

6.2. BILOXI AND ITS ENVIRONS

6.2.1. Historical Narrative

Founded in 1699 on the site of current day Ocean Springs, Biloxi was one of the earliest French settlements along the Gulf Coast and, as such, held an important role in the trade networks of the colonial period. In the latter part of the 18th century, Biloxi fell under British and then Spanish possession. During this time, the inhabitants raised livestock and produced pitch and tar. After Biloxi was chartered as a town in 1838, it grew rapidly and was established as a popular resort over the following decades. While some roads were built, the vast majority of transportation was water based until after the Civil War (Husley 1998).

Civil War engagements were fought very near Biloxi and the conflict had impacts on the town and surrounding areas. For example, prisoners of war from New Orleans were held on Ship Island (Hollandsworth 2006). However, due to the absence of a slave-based agricultural system and also because of the quick return of tourists to the area following the conflict, the aftermath of

the Civil War was not as calamitous as in other areas of the South (Nuwer and O'Brien 2006). Also, importantly, Biloxi's residents had access to abundant local marine resources to see them through times of scarcity. The city acquired some fame following the war as the site of Jefferson Davis' retirement. His house, Beauvoir, remained a popular tourist attraction at the time of this study. By the end of Civil War, Biloxi's population included foreign nationals from across Europe, Canada, Mexico, and Russia. A quarter of the population consisted of migrants from 23 other U.S. states.

Railroad service through central Biloxi began in 1870. The railroad was a catalyst for the local seafood industry's growth; Biloxi's first seafood factory opened on the Back Bay in 1880. Shortly thereafter, the national market for oysters boomed and multiple plants opened in the Back Bay and Point Cadet neighborhoods (Dyer 1971; Husley 1998). Starting in the mid-1880s, technological advances in oyster harvesting and local production of artificial ice greatly benefitted the seafood industry. Seafood plant owners generally owned fleets of fishing vessels and, as the rising costs of boat ownership forced many independent operators to work for plant owners or leave the business, the plant owners came to exercise control over the industry from harvest to processing. This was the case with a small number of African Americans who worked as commercial fishermen in the late 19th and early 20th centuries. Around the turn of the century, seafood plant owners began using new sources of labor. The first were "Bohemian," or Polish migrant laborers, who soon started to arrive seasonally from Baltimore and continued to do so for several decades. Worker camps were built to house them. Next, Croatian immigrants from the Dalmatian Coast and Cajuns from south Louisiana settled in the area, mostly around the Point Cadet and Back Bay areas, respectively, and provided a new, constant source of labor for the seafood industry (Nuwer 2006). Local shipyards were often owned by plant owners or individuals whose family members were involved in the seafood industry and these thrived on building fishing vessels (Nuwer 2010). During World War I, local shipyards experienced some demand for military vessels, but much less than shipyards further east in Jackson County.

Opportunities opened up in the 1920s and 1930s for some factory workers to own boats collectively, although their wives and younger family members often continued to work in the seafood plants (Nuwer 2006). Increased numbers of fishermen led to overproduction and plummeting prices in Biloxi's shrimp market. Factory workers suffered reductions in wages, which lead to unrest. Hope for recovery seemed dim until, in the 1940s, quick freeze processes and the sale of frozen shrimp let to larger markets (Husley 1998).

During the 1920s and 1930s, Biloxi city officials attempted to mitigate the city's dependence on seafood by emphasizing tourism to the area. In 1928, despite criticisms decrying alterations to the waterfront, a 24-mile concrete seawall was completed, intended to provide protection for the new beachfront highway. As attractions, amenities, and infrastructure grew, Biloxi became a popular site for conventions (Husley 1998). Other infrastructure advancements during the earlier part of the 20th century included new highways and a trolley system connecting Biloxi with other coastal locations. This increased property values, although some wealthier community members expressed discontent with the trolley's proximity to their beachfront estates (Brooks, Jr. 2011).

City leaders also sought additional ways to amplify business and employment opportunities. Biloxi's relationship with the military played a significant role in the city's development over time. A U.S. Coast Guard station was built in 1925. Another initiative was the construction of the Biloxi Veteran's Administration complex which provided employment to hundreds of residents between its groundbreaking in February 1931 and its opening in August

1933 (Husley 1998). Still trying to recover from the Great Depression, city leaders solicited the U.S. Army Corps to install a training facility in Biloxi to prepare soldiers for World War II. When Keesler Air Field was established 1941, the city's population effectively doubled overnight (U.S. Air Force 2006). Construction of the air field employed over 10,000 builders. The facility was renamed Keesler Air Force Base after the war. While the Hurricane of 1947 nearly destroyed the seafood and tourism industries, Keesler survived with little damage and its personnel provided emergency aid across the city (Husley 1998).

Gambling in Biloxi expanded during and after World War II and provided new opportunities for tourism. Nightclubs along "The Strip" boasted appearances by popular celebrities. After the 1947 hurricane, some influential community leaders proposed to legalize slot machines in Biloxi. The proposition failed, despite the possibilities of increased revenues. The gaming industry occupied ambiguous legal ground during this time and would for several decades. There was pressure from lobbyists to curb the gaming industry with arguments that the state constitution already prohibited it. The city quickly learned that the substantial fines derived from violations of gaming laws were a benefit. Gambling never went away, but rather went into backrooms through the 1960s (Nuwer and O'Brien 2006).

In the 1940s and 1950s, Biloxi's ranking as a world seafood processor dropped, but the seafood industry remained crucial to the local economy. During this time, boat ownership largely passed from processing plant owners to fishermen. As some local fishermen purchased larger boats, their fishing patterns expanded from inshore harvesting in Biloxi Bay to offshore trips which could last a month and span much of the Gulf (Husley 1998).

Major employment opportunities for local African Americans during the 1950s and 1960s included the tourism industry, seafood plants, Ingalls Shipyard in Pascagoula, and the Port of Gulfport working as longshoremen. The military and its associated civil service jobs also brought many African Americans to Biloxi. While many service members came temporarily for training, it was not uncommon for them to return in retirement. As with many other areas of Mississippi and the South, overt racial tensions rose in Biloxi during the Civil Rights era of the late 1950s and 1960s. The most famous local event came on April 24th, 1960 during nonviolent beach wade-in protests organized desegregate Biloxi beaches. Violence organized in retaliation escalated, leading the occasion be dubbed "Bloody Sunday" (Mason and Smith 2000). Overall, however, Biloxi was marked by less violence and tension during this period than were areas of Mississippi further north. During the 1950s and 1960s, much larger numbers of small African American owned businesses existed in Biloxi, particularly around Main Street, than existed at the time of this study. Such businesses included restaurants, grocery stores, and music venues. African American neighborhoods during this period are commonly described as having been "self-sufficient," and a major impetus for such entrepreneurship was due to segregation-era laws and social codes. During this study, local African Americans reported that, following the end of segregation in the 1960s, the condition and numbers of African American-owned businesses began to decline and a common reason given is that more blacks began to frequent white-owned businesses after segregation ended. The influx of department and chain stores to the area starting in the 1970s also seriously affected African American retailers. Recounting the state of integration in public spaces, one resident who relocated to Biloxi in 1971 explained:

It was separate- the thing was there were more black businesses. What happened, a lotta the black businesses went away. We had cleaners, black cleaners, we had stores that were owned by black people, dry good stores, when I say dry goods, I['m] talkin' [they]

sold shoes and clothing and stuff like that. And there were more people shopping within the confines of the local area. Now... you gotta drive to Walmart, or D'Iberville, or New Orleans, or Mobile to get some things that you really need. So I think we lost a lot with the community when we integrated (Crowell 2011).

The one business sector that local African Americans recall that remained successful into the 1970s was the social lounges and clubs.

During the 1960s, a secondary seawall was constructed in west Biloxi, creating greater space for tourism businesses to expand along the beachfront. However, in 1969, Hurricane Camille crippled the city and its seafood and tourism industries, and Biloxi began the 1970s still recovering. A beach replenishment program was completed in 1973, and low-interest government loan programs for individuals and small businesses helped to speed rebuilding, but Biloxi's tourism industry was still unable to effect a full recovery. Hurricane Camille had left visitors scared to travel to the area, and the worldwide energy crisis only compounded the decline (Husley 1998). Coastal tourism went into a decline and did not play a strong role in the local economy during the 1970s (Nuwer and O'Brien 2006).

While the tourism and retail sectors struggled during the 1970s, increased national demand for shrimp, relatively high shrimp prices, and low diesel prices created an economic climate that many local fishermen and plant owners still see as a "golden age" for the industry. During this time that Vietnamese refugees and immigrants began to work in large numbers in Biloxi's processing plants, following labor recruitment by Biloxi oyster and shrimp processors who bussed them in from New Orleans. During this time, some of the Croatians, Cajun, and African Americans who historically had provided labor for the plants were moving into other, less physically strenuous occupations, and Vietnamese workers soon constituted a substantial portion of the local plant workforce (Schmidt 1995). Croatian and Cajun descendants also were beginning to move out of their traditional neighborhoods of Point Cadet and Back Bay and into west Biloxi and other areas. After several years, the first Vietnamese settled permanently in Biloxi mostly around Point Cadet and Back Bay.

As elsewhere on the Gulf Coast, the 1970s were a good time for shipbuilding in Biloxi. The local boom in shipbuilding was largely fueled by the commercial fishing industry. Biloxi yards participated to a relatively minor degree in the offshore oil related work which was occupying shipyards in many areas of the Gulf. And, in contrast to neighboring Jackson County (Phaneuf et al. 2013), military related work never figured heavily in Biloxi shipbuilding.

6.2.2. The Downturn of the 1980s to Hurricane Katrina

The 1980s generally was a difficult decade for tourism and retail businesses in Biloxi. Towards the end of that decade, attempts were made to revitalize downtown Biloxi, but these were mostly unsuccessful. By the late 1980s, the entire state of Mississippi was facing unemployment of historical proportions, and manufacturing jobs that had supported middle class citizens were leaving. Biloxi's economic difficulties led to local government and economic development officials to open the way for the gaming industry (Von Herrmann 2006).

While the 1980s is recalled by many local shrimpers as having been a good time for the industry, Biloxi's commercial fishing landings declined in both volume and value in the latter part of this decade (NMFS n.d.; see Section 6.2.3). The mid-1980s saw some of the Vietnamese

who had arrived in the previous decade purchase small shrimp boats and move out of the processing plants. During this study, seafood processing plant owners were overwhelmingly positive about the contributions of Vietnamese plant workers and shrimpers to the commercial seafood industry. For example, a local plant owner said:

Most of the blacks and whites in the area ended up going to the casinos. Now it is probably 90% Vietnamese in the plant. This changed long before the casinos came to the area. The Vietnamese were better workers. They were more prompt, they worked harder. Their work ethic was just better (PP554 2010).

However, the Vietnamese's refugee status and relatively quick movement into boat ownership gave rise to the continuing rumors among local, white fishermen about government assistance enabling the rise of Vietnamese in the shrimping industry. The gradual shift of Vietnamese men from processing plants to shrimp boats resulted, over time, in local plants mostly employing female and younger Vietnamese workers. As in other Gulf Coast communities, Vietnamese refugees and migrants continued to arrive throughout the 1980s and 1990s. Some new arrivals came to join family members or friends already in the area while others came to try their hand in the shrimping industry. Vietnamese came directly from Vietnam, from other foreign countries, and from other areas of the United States.

The community and the tourism industry were transformed by the arrival of casino barges in 1991 (Figure 6.2). The Mississippi State House of Representatives passed the Gaming Control Act on March 7, 1990. Without modification, the Senate passed the bill one week later. The bill was modeled after Nevada law. It included no restrictions on the number of casino licenses that could be issued, called for only nominal fees assessed for casino operator background checks, placed no limits for gamblers on bets or losses, and permitted casinos to accept wagers 24 hours a day, 7 days a week. The bill's sponsor, Rep. H.L. "Sonny" Meridith, made a last minute change to the bill prior to the vote, deleting the words "under way." Originally the bill was to allow casinos to cruise on waters outside the state's landmass. What may have appeared as only a slight change, in fact, created new opportunity for dockside gambling. Even Governor Mabus later stated he did not fully understand the gravity this legislation would have on the state (Nelson and Mason 2006). The expansion of the casino industry, the growth of retail businesses, condominium and apartment development, and rising real estate prices all contributed to the economic boom which the area experienced in the 1990s and early 2000s. Charter boat fishing was another facet of the local tourism industry which grew during this time. Advocates of casino development cited the revenues which gaming establishments brought while detractors complained of increasing crime rates and poverty levels. Some locals also opposed what they perceived as the gaming industry's destruction of traditional local industries and heritage. The waterfront along Point Cadet provided the most visible sign of the transition from an economy based largely on commercial fishing to an increasingly casino-based one as casinos came to occupy the waterfront spaces where seafood processors had traditionally been located.

The 1980s saw seafood processors begin to move away from oystering to an increasing focus on shrimp due to the introduction of new regulations and strict hygiene standards on oyster processing. By the 1990s, the fishing industry began to experience the negative impacts of the shrimp and crab imports that were entering the U.S. market in greater volume (see Chapter 2, Volume II). Furthermore, the casinos in the area offered alternative work opportunities to those previously in the commercial seafood business. However, until the 2000s, commercial fishing

generally remained profitable for plant owners and fishermen. In the 1990s, many Vietnamese came to own larger, steel hulled Gulf trawlers equipped with on-board freezers which were capable of going out for a month at a time. By the 1990s, the commercial and religious infrastructure of the Vietnamese community in Biloxi was well established, with a number of Vietnamese owned businesses including grocery stores, restaurants, and nail shops as well as a Catholic church and a Buddhist temple. The majority of these were located on and near to Oak Street, which borders Point Cadet. Seafood processing was devoted mostly to shrimp, and Vietnamese in the area made few inroads into dock or seafood plant ownership.



Figure 6.2. Map of the Mississippi Coast showing the locations of key industries, compiled from ethnographers' notes
Source: Ben McMahan

During the early 2000s, the local tourism industry, and gaming tourism in particular, continued to expand at a considerable rate. Casinos were built along the Biloxi and Gulfport beachfronts, and several more were slated for construction. As of 1999, nine casinos were fully operational in Biloxi, and two others were in neighboring Gulfport. Property values rose in tandem with this development and condominium and hotel construction escalated along the beachfront.

During this same time, the local seafood industry began to increasingly feel the negative impacts—rising boat diesel prices, falling shrimp prices, and increasing quantities of import shrimp in the U.S. domestic market. These problems peaked around 2002 and 2003, and many local white and Vietnamese shrimpers were forced to get out of the industry altogether, downgrade to smaller vessels, or sell their vessels and begin captaining boats owned by others.

Like others in the area, seafood processing plant owners were influenced to sell their land based on disadvantageous economic conditions and the very substantial amounts that casino developers were paying for beachfront property. Many locals who had been involved in the seafood history, and many who had not, often lamented these changes, although many also attested to the benefits that casino development had brought. Some regretted the loss of a traditional local industry; others contrasted what they regarded as unsanitary and backbreaking of work in the commercial seafood industry with work in the new service economy.

During this study, few participants involved in non-gaming tourism connected their business successes to the gaming industry. However, many did speak favorably about the 1990s and 2000s as generally good economic times for Biloxi and the Mississippi Coast. Some restaurant owners discussed how casino development had been positive for their business until the casinos became more all-inclusive and began to offer a range of restaurant and shopping options within their own walls. Beachfront business owners and charter boat captains, for example, spoke about what they characterized as the gaming industry's attempt to increasingly monopolize tourist business. A vending stand owner observed:

The casinos ultimately killed this coast. They killed all the night club business 'cause the casinos are greedy. They want it all. They wanna keep people in those casinos. They don't want 'em goin' nowhere. That's why they put the night clubs, the restaurants, the retail shops in there. They don't want you to leave... We thought, "we got casinos. We're supposed to all get rich". NOT! (PP1015 2011).

6.2.3. Hurricane Katrina and the pre-*Deepwater Horizon* Disaster Social and Economic Landscape

Despite reservations about the changing relationship between tourism and the seafood industry, further large scale tourism development was ongoing when Hurricane Katrina hit Biloxi in August 2005. The hurricane destroyed or severely damaged a huge number of local businesses and residences, especially along Biloxi's beachfront. Local residents often sorrowfully recounted the loss of the majority of historic homes which had lined the beachfront prior to Katrina. Following the storm, business owners and home owners wishing to build or rebuild faced much higher insurance rates and more restrictive building codes and regulations. Particularly along the beachfront these factors kept many locally owned, smaller-scale restaurants, hotels, amusement parks, and other businesses from rebuilding. However, the majority of casinos as well as a few nationally franchised restaurants and hotels were able to build back relatively quickly. For example, six out of the 12 casinos which existed in Biloxi-Gulfport prior to Katrina had rebuilt by summer 2006; two years later all of the casinos had been rebuilt. The few hotels, restaurants, and other businesses which survived through the hurricane generally reported doing good business in the years immediately following by serving the cleanup crews, volunteers, and others who arrived in the area, but this "boom" had largely faded

by 2008. Common complaints among those in tourism included high insurance rates and very strict building regulations, a perceived focus of local government support on casino development, an accompanying lack of interest in smaller scale forms of tourism, and the waste of FEMA and other post-hurricane funds on non-essential projects.

Some tourism operators, such as charter boat fishermen, who rely heavily on long term networks of clients, reported that they had difficulty recovering such clients following Katrina. The loss of the easily accessible, visually prominent Broadwater Marina was held by some charter fishermen to be a significant loss (see also Posadas 2010). Following Katrina, charter fishermen largely operated out of docks adjoining local casinos. Some of them expressed dissatisfaction with this situation, claiming that casino management preferred that visitors not leave for extended periods to take charter trips. While the development of new casinos has been slower in more recent years, one new establishment was being built in 2011.

Following Hurricane Katrina, there was a general movement of retailers and other businesses inland, north to North Biloxi and D'Iberville. The construction of the Promenade Parkway, a large shopping center immediately outside of D'Iberville off Interstate-10 was accompanied by the construction of a number of hotels. Some who continued to operate retail and other businesses in Biloxi said Promenade's presence had further diminished the prospects of beachfront redevelopment since it left people little economic reason to venture into town.

Like beachfront tourism, the local seafood industry suffered heavily from Katrina. Much of the seafood industry infrastructure and equipment was destroyed or severely damaged. For example, the large craft harbor on Biloxi's Back Bay is still in a state of disrepair more than six years after Katrina. The small craft harbor behind Biloxi's Hard Rock casino required several years of work to become fully functional, and Broadwater Marina, frequented by both shrimp boats and charter boats prior to the storm, was completely destroyed. Some fishing vessels were lost or damaged in the storm, although most fishermen agreed that those who fished for living knew how to protect their vessels in the event of storms (Posadas 2010).

The crabbing and oyster processing industries were particularly impacted. These operations were commonly smaller than the shrimp processing plants, and thus lacked access to capital and resources which facilitated rebuilding after the storm. While several crab processing facilities operated along the coast prior to Katrina, following the storm only one small crab processor remained open in Biloxi and one other in Bayou Caddy. This prompted many crabbers who had previously unloaded their catch at coastal Mississippi processing plants to travel further east to Bayou La Batre. Oyster processing also suffered a blow from the hurricane leaving only two oyster processing plants operating along the Mississippi Gulf Coast at the time of this study. In general, the large shrimp processing plants in Biloxi were also severely impacted. Several plants moved to new locations following the storm but all of the major processors in the area had resumed operations by 2006. Biloxi continues as a major center for shrimp processing for the Gulf Coast, including large volumes from Louisiana and Texas. At the time of this study, four large shrimp plants and one smaller crab processor were located in east Biloxi, three seafood processing plants were located across the bridge in D'Iberville, and another large oyster processor and a very small crab processor were located close by in Pass Christian. All but one small processing plant, which was under Vietnamese ownership, were owned by whites. Biloxi shrimp processing plant owners maintained relationships with fishermen, unloading docks, and processing plants ranging across the Gulf Coast as well as in other areas of the United States and other parts of the world.

Table 6.1. Landings in Biloxi

Year	Quantity (million pounds)	Value (million dollars)
2011	10.7	19.9
2010	6.0	13.0
2009	12.9	19.3
2008	24.5	18.6
2007	11.7	18.6
2006	9.6	12.8
2005	8.5	15.3
2004	16.3	26.2
2003	17.4	26.8
2002	14.8	26.9
2001	14.6	29.1
2000	14.2	35.5
1999	13.4	27.9
1998	14.1	30.1
1997	9.5	23.1
1996	9.2	18.2
1995	12.0	23.3
1994	7.5	18.2
1993	8.8	15.3
1992	8.9	16.6
1991	8.8	14.4
1990	14.6	18.7
1989	12.6	22.2
1988	42.3	29.5
1987	38.2	14.2
1986	46.7	15.2
1985	41.1	13.4
1984	50.8	20.7
1983	57.6	21.0

Source: NMFS n.d.

Some local shrimpers attested that the reduction of the shrimping fleet in the period before and after Katrina was a favorable development for those remaining in the industry. Harvests in the years following Katrina were commonly reported as having been fairly good, but the industry continued to be negatively affected by the high prices of diesel and relatively low prices of seafood. The Biloxi shrimping fleet continued to include considerable numbers of both inshore and offshore vessels. The offshore vessels were generally owned and operated by Vietnamese captains and deckhands, whereas a mix of white and Vietnamese captains and deckhands operated mid-sized vessels. Most smaller vessels belonged to and were run by white captains and deckhands. White men who continued to be involved in the shrimping industry are

often descended from Croatian and Cajun French families with a long history in commercial fishing.

Oystering in the area takes place in the waters off Pass Christian. A section of the Pass Christian reef is normally closed to dredging and open only to tonging. Unlike in Louisiana (see Chapter 7), private oyster leases in the area are limited and most available grounds are public and, therefore, subject to sack limits and other regulations established by the Department of Marine Resources. Following Katrina, several reef reconstruction projects attempted to assuage damage done to the reefs both by the hurricane and other environmental factors, but no oyster reefs in Biloxi were open for harvesting during the study period. Oystering remained a largely white male occupation, with few Vietnamese or other minority participants. There remained considerable overlap between shrimping and oystering in the area, with many inshore shrimpers converting their vessels to dredge for oysters during the winter and early spring.

Crabbing in the area is small scale compared to many areas in Louisiana and there were relatively few full time crabbers operating at the time of this study. Crabbers commonly go out of Pass Christian, Ocean Springs, Gautier, or further east in Jackson County and few go out of Biloxi itself.

Like seafood processing, shipyards and fabrication shops in the area suffered damages due their waterfront location. While shipbuilding had been on the decline for some time, Katrina spelled the end for several local shipyards, fabrication shops, and supply shops. Following Katrina two shipyards were left operating in Biloxi and one in D'Iberville.

In addition to its physical and economic destruction, Hurricane Katrina also had significant effects on social networks in Biloxi and on the demographic constitution of the area. For example, Oak Street and the neighboring area of Point Cadet suffered some of the worst hurricane damage along the Mississippi Coast due to their low elevation, and many Vietnamese businesses and residential properties in this area were wiped out. In the hurricane's aftermath, a few Vietnamese owned businesses, including a bakery, a boat mechanic, a jeweler, and an auto shop, opened or reopened, but at the time of this study the street did not approach its former density of businesses and residences. Mirroring the general movement of local business further north after the hurricane, many Vietnamese opened businesses in D'Iberville and often also moved their residence there, to Gautier, or to other areas some distance from the water. Other Vietnamese left the area altogether, sometimes moving to Vietnamese centers such as Houston or Atlanta.

When Katrina hit, many Croatian and French descendants had moved away from the seafood and shipbuilding industries, and, in many cases, away from the Point Cadet and Back Bay neighborhoods altogether. However, several marine supply stores, general stores, and other Croatian and French descendent owned businesses were still operating there, and these were not only economically important, but also widely considered to be important aspects of local ethnic history. Most of these long standing businesses were destroyed in the hurricane and were not rebuilt, as they were usually owned and operated by older people nearing retirement age. After the hurricane, both the Slavonian Lodge and the Fleur de Lis Club rebuilt. Similarly, prior to the hurricane there remained a significant concentration of African American owned businesses on Main Street which included restaurants, bars, and small grocery stores. While local African Americans generally agreed that these businesses had declined since the 1970s, they also agreed that, until Katrina, these establishments, continued to maintain and serve a steady clientele. Several of these businesses shut down following Katrina and owners of those that did survive complained that business had declined considerably in the years following the storm. The owners

of small businesses in east Biloxi and along the Biloxi beachfront all commonly voiced that the area had undergone an unfavorable transition following Katrina, from one that included a diverse range of businesses and that appealed to many different types of people, to one that focused more exclusively on gaming. Such complaints extended to local utilization of community based block grants and other funds in the aftermath of Katrina. Some local residents attested that, instead of being used to facilitate the recovery of neighborhoods heavily impacted by the hurricane, post-Katrina funds had been used to boost the development of large, corporate tourism along the Biloxi beachfront.

At the time of the study, military presence continued to have significant impacts on retailers and other businesses in Biloxi. Retailers in west Biloxi also experienced substantial damages as a result of Hurricane Katrina. However, many proprietors in this area, especially those located along the stretch of Pass Road immediately abutting Keesler Air Force Base, reported that, in the years after Katrina, the constant military presence imbued their businesses with a degree of stability. Many businesses provided military discounts and arranged their schedules, work shifts, and specials around base schedules. Military presence acted as a buffer against economic fluctuations and seasonal cycles in commercial seafood and tourism. Similarly, the loss of military clientele can have dramatic negative impacts for local businesses as was experienced by some businesses in the years prior to this study when certain military base entrances were closed due to post-9/11 security concerns.

In addition to dispersing populations, Katrina also brought new people to the area, particularly large numbers of Hispanics. The first substantial group of Hispanic migrants to the Mississippi Coast came mostly for the casino construction jobs in the 1990s. Local casinos and other sub-sectors of the tourism industry had employed guestworkers from a variety of countries, including people from the Caribbean, Central Asia, and Latin America, for years, but the construction-related increase in Hispanics was noticeable to residents.

During the late 1990s and the early 2000s, several large seafood plants began meeting their labor demands by bringing in Hispanic workers, mostly from Mexico, on guestworker visas. Except for older workers, the Vietnamese workers who had provided a substantial portion of seafood plant workforces since the 1970s were generally said to be moving out of the industry by then. The Hispanic workers were commonly reported to favor working in the plants because it required little English proficiency or formal education, and also because the seasonality of the fishing industry permitted annual extended trips to Vietnam.

Still, the Hispanic population in the area remained relatively low until Hurricane Katrina prompted a substantial Hispanic in-migration for the construction and cleaning jobs which were widely available. The majority of Hispanics who came to the Biloxi area were from elsewhere in the United States or from Mexico, but people also came from Honduras, Guatemala, and Nicaragua. In the years following Katrina, a number of Hispanic businesses, mostly grocery stores and restaurants, opened to cater to this new ethnic group as well as to the general population. However, by early 2008 a drop in construction work resulted in considerable numbers of Hispanics leaving the Biloxi area. Some who stayed turned to work in the seafood plants, local casinos, restaurants, shipyards, and domestic service. A small number of Hispanics also found work as deckhands in the shrimping industry, though none were mentioned to be boat owners.

Importantly, the aftermath of Hurricane Katrina saw an influx of new non-profits and religious organizations to the area, and the expansion of non-profits which had existed prior to the storm. A wide range of non-profits had established themselves in the area, including ethnically centered non-profits, environmental organizations, and organizations providing health and social services. This considerable expansion of the non-profit sector following Katrina prompted a variety of responses from local residents. Most locals appreciated the important role that non-profits and religious organizations played in rebuilding process following the hurricane. Many additionally credited non-profits with imbuing local people with a new sense of citizenship and rights, and an increased knowledge of the basic services to which they are entitled. An individual who worked with a local non-profit described this process in terms of the local African American community in particular:

One of the major change that [Katrina] brought about was people who didn't live in Mississippi came down and showed blacks how the game worked...For the first time in my memory, for the first time as far as I know, we got a chance to participate in the process. So- in fact, now I know several blacks who are executive director of non-profit organizations, I am in constant contact with people who are black and run organizations...And our attitude about finding available resources have changed. That has been the major impact...Even with the devastation and the loss of life, Katrina has been a plus for this area. Every municipality and most individuals are better off post-Katrina than pre-Katrina (PP666 2011).

However others, and sometimes even the same people who praised non-profit activity in the area, attested that the growth of the non-profit sector had created new dependencies of various kinds and had thus worn away at local work ethic and at the more informal social networks which traditionally provided support.

6.3. SPECIFIC EFFECTS OF THE SPILL

Because of Biloxi's diversified economy, the direct impacts of the BP oil spill are more difficult to parse out here than in Gulf Coast areas that are more dependent on a single industry such as commercial fishing. This said, during 2010-2011, many of the area's residents, businesses, non-profits, and government officials reported various impacts as having directly related to the oil spill.

Many people in the area remarked that the oil spill came at the worst time possible: the start of the summer season for both the commercial seafood and tourism industries in the area. In May 2010, soon after the spill, training for the Vessels of Opportunity (VOO) Program began at various sites along the Mississippi Coast, including Point Cadet in Biloxi. At the program's height, it deployed around 800 Mississippi fishermen (Kirgan 2010). The program in Biloxi ended on September 16th, 2010, as it did across the Mississippi coast. After that time, a relatively small number of commercial and charter fishermen continued to work in various capacities on projects and research related to the oil spill. While many commercial and charter fishermen were eventually hired onto the VOO program during summer 2010, there were many complaints from both fishermen and other local residents that the program had not hired local

fishermen quickly enough, and that it had failed to screen out non-locals and non-commercial boat owners as thoroughly as it might have.

State and federal waters which Biloxi shrimpers and crabbers normally fished were often closed during summer 2010. Closures were unpredictable, and were reported by fishermen as having created a situation where planning for the future was difficult if not impossible. Those shrimpers who made it out for the 2010 white shrimp season generally reported a decent harvest but commonly expressed concern that this might have been due to the relatively low numbers of shrimpers operating during this time.

Due to the oil spill, many local seafood processors severely curtailed operations during the summer of 2010 and many local plant employees were laid off or had their hours severely cut. Companies relying on H-2B visa workers either canceled these visas or brought in workers later in the year, and in fewer numbers than was customary. In the Biloxi area, Southeast Asian or Hispanic immigrants, and especially those with limited English proficiency, were constrained in opportunities for finding other local employment.

For locals involved in tourism and retail, the possibilities for getting involved in the oil spill cleanup depended on the nature of their business. For example, deckhands and captains in charter fishing were frequently able to participate in the VOO program. Likewise, most hotels in Biloxi reported a sizable, albeit temporary, increase in clientele during summer 2010 due to large numbers of cleanup workers in town. A relatively small number of restaurants were contracted to cater for BP cleanup crews, although much of this work was reported to have gone to non-local catering companies. However, other retail and tourism oriented businesses in the area, such as souvenir shops or clothing stores, had few opportunities to offset any losses suffered from the spill by becoming involved in the cleanup.

In 2011, the brown shrimp season opened early, due to the Mississippi River floods which occurred in the spring. Brown shrimp landings during that season were generally described by local shrimpers and others knowledgeable about the industry as lower than normal, though not terrible. Shrimpers also commonly stated that the schools of shrimp were often not in areas where they would normally would have been found. Also frequently observed was that white shrimp began to be caught in good quantity earlier in the year than was usual. During the summer of 2011, shrimpers and processing plant owners expressed hopes for a good white shrimp season. However, the white shrimp season in fall-winter 2011 was overwhelmingly stated to be very poor, with many industry veterans adding that it was the worst that they could remember. Shrimp landings and prices were reported to be very low. A local shrimper commented on some of the lingering uncertainty about the oil spill as well as the white shrimp season.

When I try to go to sleep at night I think about what if some woman miscarries in 10 years because she ate the shrimp that I'm selling... I spotted a huge patch of oil about 7 miles wide 2 weeks ago coming towards Venice... the season has been very tough thus far. We're getting 50-75 cents a pound for shrimp. Gas is \$3.25 a gallon. It really isn't possible to get by (PP872 2011).

Biloxi fishers and processors reported that shrimp landings were very low throughout the Gulf, thus reducing the potential for large shrimp boats and shrimp processors to turn to new locations along the coast for shrimp. Throughout 2011, local shrimpers attributed low shrimp landings to the effects of the oil spill and dispersants, but also to the Mississippi River floods

and, less frequently, to longer term shrimp cycles. Those who believed the BP oil spill to be partly or wholly responsible for the low season also commonly bemoaned the difficulty of separating impacts of the oil and dispersants from other causes.

The oyster season generally begins around October and ends in April, so oystering had just recently come to an end at the time of the oil spill. During fall and winter 2010, following to the spill, the oyster reefs in Pass Christian had been closed to dredging and open only to tonging. Many local shrimpers who normally convert their boats to dredge for oysters in the winter were unable to work their vessels. These oystermen commonly mentioned the physical impacts of the oil spill and subsequent dispersant use on oyster beds as potential reasons that the beds had been closed to dredging. The oystermen who normally tonged, on the other hand, reported a fairly good season and prices in 2010 and 2011. The few oyster processors operating in the area reported that the cost of oysters had gone up substantially during the 2010-2011 season and that they were needing to bring in a greater number of oysters from areas such as Texas, which were not impacted by the oil spill. Oystering in the area was further impacted by the Mississippi River floods in the spring of 2011. Following the flooding, in the summer of 2011, high mortality rates for oyster reefs in Pass Christian were reported and the grounds were closed shortly after the season opening in fall 2011 (Dow 2011).

Unlike other areas of the Gulf Coast, including many Louisiana parishes, the moratorium and suspension of deepwater drilling had only minor impacts on Biloxi. Relatively few residents are directly employed for the oil industry on the oil rigs, though area smoke shops and convenience stores noted a drop in business from fewer workers traveling through the area to Louisiana to go work offshore. Those working as OSV captains and deckhands did report direct impacts from the moratorium, but relatively few of them live in the area. Furthermore, there are few shipyards and other businesses, such as labor contractors, with strong relationships with the offshore oil industry.

Most residents in the area agreed that relatively little oil washed up on the Biloxi beachfront. However, many operators in the tourism industry in Biloxi reported major impacts following the oil spill. The majority of those in tourism who reported economic impacts linked them to the regional and national perceptions of the spill they commonly stated were “created” by the media, rather than the physical oil impacts. A charter boat captain discussed this at length:

When the spill happened, there was a lot of press media that was focused on this area and this event. This was what was happening nationwide and all of this definitely had a negative impact on business... The problem is that perception becomes reality. People saw things on the media like those pictures of birds covered in oil and they didn't want to come down any more. They thought fishing in the Gulf was finished. I was at a bar in San Francisco and I remember that when I mentioned that I was a charter boat captain out of Biloxi, the bartender there asked, “aren't the waters there totally ruined?” (PP733 2011).

The sub-sectors of tourism which reported the strongest impacts tied to the spill include beach vendors, barrier island excursion businesses, beachfront retail shops, charter fishermen, seafood restaurants, and those in ecotourism.

The gaming industry was the most prominent local sector which officially reported little impact from the spill and which posted increased profits during summer 2010 (Gulf Coast Business Research Council 2010). However, gaming industry employees staged protests later on in the year claiming that higher casino revenues did not necessarily mean higher or even equal

wages for workers. These employees described heavy losses in tips and hours worked following the spill (Pham-Bui 2010).

Importantly, the heavy military presence in the Biloxi area buffered some local businesses from losses incurred after the spill. Retail businesses and hotels located along particular corridors near the military base, such as Pass Road in west Biloxi or I-49 in Gulfport, often drew a substantial portion of their clientele from the military and thus reported suffering few direct impacts from the spill.

The summer 2011 tourism season was generally reported to be an improvement over the summer of 2010. However, many in the tourism industry expressed that the BP tourism grants given to Mississippi in May 2010 and in Spring 2011 could have been put to better and quicker use. Many complaints about the recovery, or perceived lack thereof, of the tourism industry in the Biloxi area concerned what many business owners saw as an overwhelming focus on gaming, and a disregard for the development of other forms of tourism. For example, a vending stand owner complained about what he described as a lack of concern for smaller, locally owned facets of the tourism industry following the spill:

Nobody's ever said one word about, in the mic, how can you get all this millions of dollars to promote tourism and you haven't put one commercial out about the beach and jet-ski rentals. That's something that people would want to do, is come ride jet-skis and spend the day at the beach, or something like that... I've got family all over the place and they've never seen any commercials at the beach... I don't know what they're doing with the money. Besides paying for some hotel rooms (PP1014 2011).

This type of concern about the use of post-spill recovery funds and grants was not limited to the tourism industry but was in fact widespread among residents, business owners, and workers in the area.

Many non-profits in the Biloxi area reported various types of impacts following the spill. The nature and extent of impacts were dependent to a large degree on the main foci of these respective organizations. Food banks commonly reported having to serve increased numbers of people during and after the summer of 2010. Those involved reported this increase to be related to an influx of non-locals to the area for short lived oil spill cleanup work. The few homeless shelters in the area likewise reported substantial increases in the numbers that they were serving starting in the summer of 2010.

Local non-profits which focused on serving particular ethnic communities sometimes reported considerable changes in levels of activity and types of services provided following the oil spill. This was particularly the case with non-profits dedicated to serving the Vietnamese Americans in the area. Since this community was heavily involved in the shrimping industry, one of the industries arguably most impacted by the spill, and because of relatively low levels of English proficiency among many older community members, non-profits and individuals serving this community took on a variety of roles following the oil spill, including helping to establish a bilingual retraining program for displaced Vietnamese workers in the area. On the other hand, non-profits which served ethnic communities that were not so directly tied to industries widely acknowledged as having been impacted by the spill commonly reported less change in their day to day activities as well as long term goals. Employees at those non-profits commonly aggregated the impacts of the spill with various other ongoing factors, including the poor

national economy and the lingering effects of Hurricane Katrina, which they argued were still negatively impacting their respective communities.

One result of the spill was the grants and other funding that became available. Many non-profits in the area reported competing for the grants, although many expressed concern about the transparency and fairness of the processes through which such funds were distributed. Furthermore, the restricted nature of many of the grants, especially those stemming from the BP claims process (see Chapter 6, Volume II), and the relatively low level of funding available, especially compared to funds made available for disasters such as hurricanes, led non-profit employees and directors to frequently voice the problem of having no clear way to be compensated for their considerable expenditure of resources following the spill.

Claims filed in the Biloxi area were processed at an office on Lemoyne Blvd. In addition to English, the office offered assistance in both Vietnamese and Spanish. Local fishermen and processing plant owners generally reported that the claims process had functioned more smoothly and fairly under the direct oversight of BP. Many in the seafood industry argued that Kenneth Feinberg and GCCF taking over the claims process was a negative development.

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CHAPTER SEVEN: POINTE-A-LA-HACHE, EMPIRE, PORT SULPHUR, AND PLAQUEMINES PARISH, LOUISIANA

Carolyn Ware

Louisiana's southernmost parish, Plaquemines, is rural and industrial with a small, scattered population and no incorporated communities (Figure 7.1). It has six census-designated places (CDPs) and dozens of small settlements or neighborhoods, many on former plantation sites. The Mississippi River cuts the parish into eastern and western halves, connected only by two ferry crossings. Geography and politics further divide Plaquemines' agricultural northern end from a fisheries-and-oilfield dominated southern region. Everything downriver of Bohemia on the east side, and Venice on the west, is accessible only by boat or aircraft.

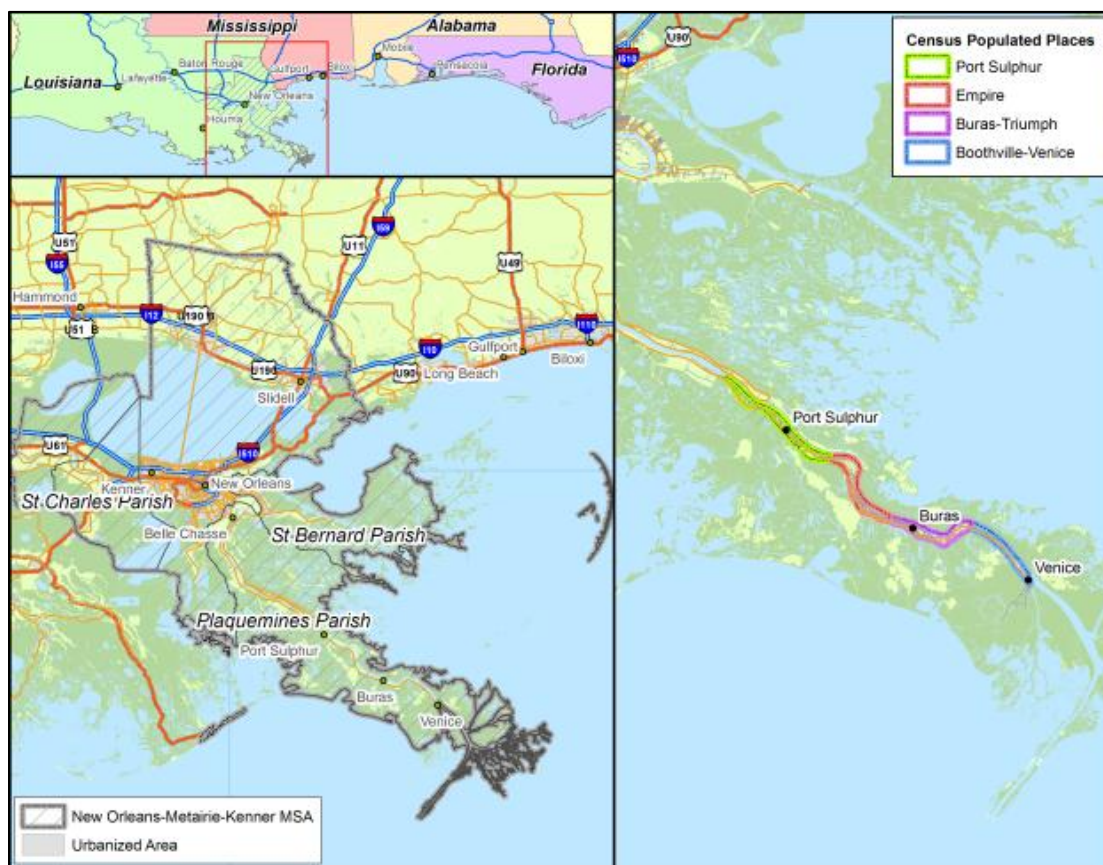


Figure 7.1. Map showing Plaquemines Parish and study communities
Source: Ben McMahan

Once part of the colonial Territory of Orleans, Plaquemines has attracted a diverse cultural mix over the last three centuries: French and Spanish colonists, Croatians, African-Americans, Creoles of Color, Native Americans, Anglo-Americans, Italians, and Vietnamese, leading one writer to call it a “melting pot on the bayou” (Evans 1963). In particular, the local prominence of Croatian oystermen and African-American and Creole fishermen distinguishes Plaquemines from other coastal parishes. Plaquemines is a major shipping port, a highly

productive area for seafood, the hub of the state's citrus industry, and a leading producer of oil and natural gas.

Because Plaquemines' communities are small, ethnically distinct, and largely undocumented, three sites were selected for study: Pointe a la Hache on the eastbank, Empire and Port Sulphur on the westbank. The general overview of Plaquemines history below is followed by specific discussion of each research site and the effects of the disaster there.

7.1. PLAQUEMINES PARISH HISTORY

Much of Plaquemines Parish's strategic and economic significance derives from its location at the juncture of the Mississippi River and the Gulf of Mexico. Native Americans farmed its natural highlands, navigated the lower river, harvested (and perhaps traded) clams and oysters from the Gulf, making implements from the shells (Kniffen 1936; Lincoln n.d.-a; Buras 2006). Many local place names are adaptations of Native American words, and the parish's name is based on a Mobilian word for persimmon.

Long before LaSalle claimed Louisiana for France in 1682, other European explorers crossed Plaquemines seeking the river's mouth. Control of the lower river meant control of the entire Mississippi River Valley. Following LaSalle, French Canadian brothers Bienville and Iberville arrived in 1699 to establish a French colony, and building a fort on the lower Mississippi was a first priority. An outpost called Fort de la Boulaye was completed on the river's eastbank in about 1700, but was abandoned within a few years because of flooding. Its replacement, *la Balize*, was a combination fortress, lighthouse, pilot's station, and warehouse on Southwest Pass near the mouth of the river. When the French decided in 1722 to move their capital from Mobile to the New Orleans (because New Orleans was on the river), the Balize and New Orleans became the colony's most strategically important settlements (Lincoln 2008; Buras 1996).

Plaquemines' alluvial soil was suited to agriculture, especially in the parish's northern half. European colonists' first crop was indigo, soon succeeded by sugar and rice, and later citrus and vegetables. French and Spanish land concessions were granted along both sides of the river, and a few pioneers had cleared land there by the mid-19th century. Gradually, a semicircle of plantations around New Orleans expanded into northern St. Bernard Parish and Plaquemines' eastbank. Early settlers included families of French and Swiss soldiers (the Burat family, now Buras); French-speaking Alsatians from Louisiana's German Coast (Engels, Hingles and Frederics); and French colonists named Martin, LaFrance, and Fontenelle, among others (Bourquard 1987; Meyer 1981; Stringfield 1989).

Colonial Plaquemines developed a slave-based economy very early, as settlers depended on slave labor to help dig drainage canals and clear cypress forests. Enslaved Africans with strong agricultural skills began arriving in the colony in the 1720s (Hall 1992). The parish's black population soon outnumbered white settlers, who constantly feared slave revolts (Sitterson 1953; Schweninger 1989, 1996). More substantial development of Plaquemines began at the turn of the 19th century with introduction of new industries, people of other nationalities, and better transportation. Sugar planting and processing became more profitable after invention of the de Boré process in 1795, and sugar became Plaquemines' economic foundation. The 1803 Louisiana Purchase brought an influx of Anglo Americans, some of whom became very successful and influential planters in Plaquemines. Few Acadians settled there, but Continental

French immigrants (*les français étrangers*) arrived throughout much of the 19th century to work as plantation managers or merchants (Knipmeyer 1956; LaChance 1992; Brasseaux 2005). Historian Carl Brasseaux suggests that the majority of the parish's French families are descendants of these 19th-century "foreign French" (Brasseaux 2008).

Another wave of Francophone immigration came from St. Domingue in the 1790s and early 1800s, when thousands of white planters, free people of color, and African slaves fled the Haitian Revolution. Some of these Caribbean refugees settled on Plaquemines plantations, enlarging the parish's population of free people of color and spurring growth of Louisiana's sugar industry (Sitterson 1953; Schweninger 1989, 1996; Whitten 1995). Labor-intensive sugar cultivation required frequent infusions of workers throughout antebellum times, and 19th-century planters began turning to Virginia and the Carolinas for new slaves (Follett 2005). The parish's long sugar history resulted in a large, deeply rooted, African-American population that represented 23% of parish residents in 2000 (U.S. Census Bureau 2000).

As in antebellum New Orleans, a three-tiered racial "caste" system of whites, free people of color, and (usually enslaved) blacks was firmly entrenched in Plaquemines. When Emancipation erased legal differences between African Americans and Creoles of Color (descendants of free people of color), strong social distinctions remained (Brasseaux, Fontenot, and Oubre 1994; Dormon 1996; Knill 1997). One legacy was the parish's "rainbow schools," separate schools for white, Creole, and African-American children during the Jim Crow years (Kammer 1941; Kane 1944; Barrois 1962). Three communities in Plaquemines—Pointe a la Hache, Davant, and Diamond—are registered Creole communities (Creole Heritage Foundation, n.d.).

Forts along the lower river played a prominent role in defense of 19th-century New Orleans. In the War of 1812, soldiers at Plaquemines' Fort St. Philip turned back British ships after a nine-day battle. Five decades later, the Civil War took a key turn when Union forces managed to defeat Confederates at forts St. Phillip and Jackson (built in 1822) and take control of New Orleans. (Privately-owned Fort Jackson and St. Philip are now national heritage sites. Legislators and a local historical association are lobbying for the National Park Service to purchase Fort Jackson and create a museum there.)

The Civil War destroyed Plaquemines' plantations and privately-owned river levees, worsening flood problems. Financially-drained French and Creole of Color planters sold their lands to northern investors as plantations shifted from single-family ownership to corporate ownership. Many sugar estates were subdivided into smaller farms. As rice production and the lumber industry gained importance, the parish moved from a one-crop model to a more diversified economy.

In the post-Civil War years, freedmen's settlements such as Bertrandville and Promised Land grew up around old plantation slave quarters. Hundreds of black sugar workers left the parish for New Orleans and other urban centers, or found employment in local sawmills, railroad construction, and river-related work. In response to a critical labor shortage on sugar plantations, labor agents recruited African-American field hands from the upper South (Sitterson 1953). Local planters also imported Sicilian peasants to work their fields, and many of these families settled in Plaquemines as truck farmers (Scarpacci 1991).

As Plaquemines' sugar economy faltered in the second half of the 19th century, other industries emerged. Commercial oyster fishing became a viable industry at mid-century with an influx of Croatian men from the impoverished Dalmatian coast. Expert fishermen and boat builders, Dalmatians soon dominated the local oyster industry, transforming it from a small,

seasonal occupation to year-round cultivation and harvesting (Lovrich 1967; Vujnovich 1974; Wicker 1979; Ware 1996; Riden 2003; McGuire 2006; Horst 2011). In Barataria Bay, a largely Filipino workforce at Chinese-owned fishing platforms harvested and dried shrimp for export to Asia, taking the industry to a new level (Espina 1988; Pilapil 1996; Davis 2010). Likewise, canneries in Myrtle Grove, Empire, Ostrica, and Oysterville expanded the market for local shrimp and oysters (Buras 1996; Davis 2010; Horst 2011). These factories primarily employed women and children for low pay, under often-deplorable working conditions, but they provided an economic foothold for minorities and new immigrants. Some Plaquemines shrimp and oyster factories still operated at mid-20th century.

Transportation, essential to commercial growth, improved dramatically in the 19th and early 20th centuries. The Mississippi River was the region's "highway," but navigation was plagued by shifting sandbars that blocked access to the river's mouth, delaying ship traffic indefinitely. As a result, the Port of New Orleans languished as ships chose alternative routes. Self-taught engineer Captain James Eads, however, convinced Congress to let him to build jetties to channel the river and force it to create a deeper channel (Buras 2006; Barry 1997; Davis 2010). Despite widespread skepticism, construction of the Eads jetties in 1875 succeeded in making New Orleans one of the busiest ports in the country (Barry 1997). Today Plaquemines Parish is the gateway to the Ports of New Orleans and Baton Rouge, and more than 5,000 vessels a year pass through it. The Port of Plaquemines has 12 anchorages and two of the country's largest coal loading terminals (Port of Plaquemines n.d.).

By the end of the 19th century, railways on both sides of the river offered faster, more efficient transport of seafood and other crops to New Orleans. The New Orleans, Fort Jackson, and Grand Isle Railroad, built in 1889, extended from Algiers to Buras; eastbank tracks ran from Elysian Fields to Pointe a la Hache. Railroads also encouraged tourism, as day excursions to Plaquemines Parish communities (accompanied by brass bands) became popular among New Orleanians (Koenig 1981).

The 20th century brought numerous events that reconfigured Plaquemines industry and community life: death of the local sugar industry, discovery of mineral wealth, a major population shift, the Civil Rights movement, and a string of catastrophic hurricanes. River flooding and crevasses wiped out surviving sugar plantations by the 1920s, around the time that commercial citrus production flourished in south Plaquemines. Citrus had been grown there as a supplemental crop since the 18th century but remained a "minor venture" until the late 19th and early 20th century (Kane 1944). The lower westbank communities of Nairn, Buras, and Triumph were Louisiana's most productive areas until severe freezes in 1962 and 1963, followed by hurricanes Betsy and Camille a few years later, destroyed groves there (Vujnovich 2000; Ware 1996). Cultivation of "Louisiana Sweet" oranges, grapefruit, and satsumas is still an active industry in the northern half of the parish, celebrated since 1947 by the Plaquemines Parish Orange Festival.

Mineral exploration in the 1920s and 1930s further diversified Plaquemines' economy. Sulfur became an economic force in 1932, when Texas-based Freeport Sulphur undertook the enormous challenge of building a mine in the marshes of Lake Grande Ecaille (Davis 2010). For a time, Grand Ecaille was the most valuable sulfur mine in the world, operating 24 hours a day and producing 1,200 tons of marketable sulfur daily (Davis 2010). In 1966, Jefferson Lake Sulphur Company began mining sulfur in Lake Hermitage. The parish's sulfur was largely depleted by the late 1970s, when Freeport shut down its Grand Ecaille mine (Davis 2010).

Local oil exploration began at about the same time as sulfur mining, with Texaco drilling its first Plaquemines well in 1929 (Davis 2010). Politics complicated early mineral development, as longtime district attorney and parish president Leander Perez held “practically absolute political and economic power” in Plaquemines for five decades (Barrois 1962:366). As parish historian Rod Lincoln notes, Plaquemines’ political machine skillfully used mineral companies as extensions of their own power (Lincoln 2008, see also Conaway 1973 and Jeansonne 1977). Perez dictated which companies could do business in Plaquemines, as well as whom they could hire and fire. Outside workers were required to be fingerprinted, photographed, and registered with the parish to obtain—for a fee--a work permit. Few black applicants received these permits, and local people of color were rarely hired for sulfur and oil jobs (Zebrowski and Howard 2005). Suddenly, ability to prove undiluted white ancestry became crucial in the racially-mixed parish.

Most mineral leases were negotiated through the Delta Development Company and Louisiana Coastal, owned by Perez and his allies. These dummy organizations leased mineral-rich marshland from parish levee boards (controlled by Perez), then subleased it to oil and sulfur companies in return for an “over-riding royalty,” a fixed percentage paid on extracted minerals. If a company balked at these terms, the parish could deny drilling, blasting, and pipeline permits or throw up other obstacles. Over time, Perez skimmed as much as \$80 million in oil royalties (Conaway 1973; Parent 2004). Eventually, Texaco, Humble, Gulf, Shell, Tidewater, and California Oil all operated in the parish, importing Anglo-American workers from Oklahoma, Texas, and Mississippi and altering Plaquemines’ predominantly Francophone culture. By the end of World War II, Plaquemines was producing more oil than any other Louisiana parish, about 18 million barrels a year, and by 1957 Plaquemines oil production had reached \$184 million annually (Conaway 1973). With the rapid growth of offshore drilling in the 1950s, Venice became a major supply and transportation hub for the offshore industry, a boon for the local economy. Venice, according to an oilfield support company executive, was the “Fourchon of its day” until the early 1990s, when rigs moved into deeper waters. Venice lacked the required footprint and water depth for accommodating large supply boats, barges, and tankers for deepwater drilling and production. At the time of this study, locals reported that about 90% of oil companies were operating out of Port Fourchon, and Venice’s economy had suffered (CW503 2011). The community was referred to by at least one parish resident as a “ghost town” (Turlich 2002).

The parish’s military and economic importance was particularly evident during World War II. New Orleans was a wartime port for troops and supplies, and German submarines attempted to disrupt transport along the lower river (Kane 1944; Lincoln n.d.). The Grand Ecaille mine and Port Sulphur, prime targets because sulfur was used in munitions, were declared combat zones in 1942 (Lincoln n.d.). Guard towers, machine gun nests, and surveillance planes protected the lower coast, and two military bases were built at the river’s mouth. German submarines attacked ships in the Gulf daily, and victims were brought upriver to Plaquemines communities for treatment or burial (Buras 2002; Lincoln n.d.).

World War II military service had a powerful impact on African-American soldiers stationed in racially-integrated European nations. Returning home, they were determined to resist Louisiana’s oppressive Jim Crow laws, leading voter registration drives in the late 1940s, 1950s, and 1960s. Gains were slow, however, and the Civil Rights era was troubled and violent in Plaquemines. Leander Perez, a vocal arch-segregationist, ignored the archdiocese’s orders to integrate Catholic schools, one of which was firebombed. He resisted federal mandates to integrate public schools until a court order forced the parish to comply. Plaquemines promptly

created private academies for white students, supported by public resources. Today schools are legally integrated but some, such as Lower Plaquemines High School in Port Sulphur, have predominantly black student bodies, while others are largely white.

Leander Perez died in 1969, not long after his retirement from public office. Son Chalin replaced him as parish council president, and Leander Jr. became district attorney, maintaining the political dynasty for 15 more years. In the early 1980s, the brothers' feuding led to legal battles and political defeats, opening the door for political opponents. For the first time, African-American representatives were elected to the parish council and school board, where they could address minority concerns—such as the Perez family's refusal to apply for federal anti-poverty funding (Conaway 1973; Jeansonne 1997; Parent 2004). These events are documented in the 1984 film *The Ends of the Earth*.

New immigrants and refugees continued to arrive in Plaquemines to seek work in its fisheries. In the early 1980s, after the fall of South Vietnam and Cambodia, Vietnamese and Cambodian refugees settled in the Empire, Buras, and Boothville-Venice areas. Arden (1981) records one early group of Vietnamese immigrant fishermen who left Plaquemines after facing discrimination before 1980; the longest-resident Vietnamese inhabitants of the parish contacted for this study arrived in 1985 (BM497a 2011; BM504 2011). Most became shrimpers and crab fishermen and, despite initial resentment from local fishermen, have generally been successful. Cambodian fishermen were still arriving in Plaquemines in the summer of 2011 when fieldwork was conducted; many in this small but growing Southeast Asian community in Lower Plaquemines came from either California or the Philadelphia area; some are connected through extended family (BM499 2011, BM502 2011). A number of Vietnamese families became seafood processors, dock owners, and restaurant or store owners. Since Hurricane Katrina, many Vietnamese fishermen live in Plaquemines only during fishing season, and spend the rest of the year in larger Vietnamese communities. Latinos, the parish's newest immigrant group, work as deckhands on oyster and menhaden boats; as agricultural laborers; and as construction workers. The local documented population is still small but growing, particularly in the post-Katrina rebuilding boom. There are several Latino-owned restaurants and other businesses in Belle Chasse, and public libraries host English-as-a-Second-Language (ESL) classes for Spanish speakers.

Plaquemines' population has shifted significantly over the last century. The older eastbank gradually emptied as oil and sulfur brought more commerce to the west side. There was also a gradual migration (some call it a retreat) from rural south Plaquemines to the urbanized northern end. Belle Chasse, a former sugar plantation, was a small town in the 1930s (WPA of Louisiana, c.1930). In the postwar years, the town grew and merged into the greater New Orleans metropolitan sprawl. Its population and economy received a boost in 1957 when the Naval Air Station moved there from Lake Pontchartrain's south shore. The opening of the first span of the Greater New Orleans Bridge (now Crescent City Connection) in 1958 linked Belle Chasse to New Orleans, bringing new families to the area in the 1960s (Jeansonne 1977). Some white families fled Port Sulphur's newly-integrated schools for Belle Chasse in the 1960s as well (Turlich 2002). Two devastating hurricanes in four years—Betsy in 1965 and Camille (a Category Five storm) in 1969—caused extensive damage in southern and eastbank Plaquemines, contributing to this northward migration (Buras 1995; Zebrowski and Howard 2005). By 2000, Belle Chasse had an overwhelmingly white (92.12%) population of 9,848 residents, with a median household income of \$47,271, making it Plaquemines' largest and most affluent—

though still unincorporated—community (U.S. Census Bureau 2000a, U.S. Census Bureau 2000b).

By 2010, Plaquemines Parish had regained 85% of its pre-Katrina population (Rioux 2010), but the majority had shifted northward. The hurricane's devastation of southern Plaquemines brought a surge of storm refugees to the relatively unscathed Belle Chasse area, spurring construction of new housing developments and commercial centers. Belle Chasse's population swelled to 12,679 in 2010 (U.S. Census Bureau 2010). Northward migrations in the wake of hurricanes and floods are a familiar pattern for Plaquemines, but most residents eventually return "down the road" to rebuild their communities. This time, however, the post-hurricane tilt may be permanent. Parish president Billy Nungesser estimates that three quarters of parish residents now live north of the Conoco Phillips refinery in Alliance (about 14 miles below Belle Chasse), while eastbank and lower westbank communities remain almost empty (Rioux 2010).

Many Plaquemines families have lived in the parish for generations and have strong family, economic, and cultural attachments. Residents are proud of their independence, resilience, willingness to help each other, and ability to live off the land and water. A local employer half-jokingly observed, "If something happened to the world, I think these are the people who would be left" (CW464 2011). Most are determined to stay there if they can.

The *Deepwater Horizon* oil spill had an immediate and profound impact on Plaquemines Parish, still struggling to recover from Hurricane Katrina. Plaquemines was the nearest land mass to the Macondo well, and its marshes were first to be breached by oil. Effects were most evident in ethnically-diverse south Plaquemines, whose economy rests mainly on the oilfield and fisheries. The oil spill's effects on commercial and sports fishing are discussed in the community descriptions below.

The drilling moratorium also affected Plaquemines' economy; as a local oysterman and oil company consultant commented, "Everything [in south Louisiana] is hinged on energy—mom and pop restaurants. The oil industry is everybody's livelihood. Everybody is impacted by it" (CW492b 2011). More specifically, the Boothville-Venice area may have lost an opportunity to reverse its post-1990s economic decline. According to an oilfield-supply executive, new petroleum development in the eastern Gulf was in the planning stages before the moratorium, with Venice poised to become a stop-off point to eastern leases:

I think the whammy that's going to hit Plaquemines and Venice is [that] they were just about to start opening up more East Gulf deepwater leases before the spill. It was a political and administrative struggle to get drilling further east in the Gulf Coast approved, because moving the industry east brings in the people in Florida who don't want anything to endanger their beaches. . . . People in Florida and Alabama are going to be very vocal [in opposition to eastern leases], so God knows when that will ever come back. That's going to be the biggest problem for the plan to get Venice going again.... This was a big chance to bolster the economy, but it was stymied. (CW503 2011)

The parish also reaped some financial benefits post-spill. The Venice area became a hub for first responders and international media covering the event, and Myrtle Grove Marina, 50 miles up Highway 23, also housed visitors; in comparison, the parish's eastbank saw few visitors or benefits. One marina owner commented that the main benefit to his was rental of all their lodging and high sales in the marina's restaurant. On the marina side of the operation (their

marine supply store, bait shop, fish cleaning services, and fuel dock), business was down around 40% (BR158 2011). The majority of the workers were gone from the marina by February of 2011 (BR158 2011). BP also employed outside contractors and some local food service businesses to provide meals for workers, but some businesses decided that these subcontracts were too small and “weren’t worth the trouble” (BR161 2011). A Buras restaurant owner explained:

First of all, we only got a contract for 200 lunches, as opposed to some companies and restaurants not from here who got, like 5 or 10 times more. And then by the time we put in the different bits we were required to include, fruit, sandwich, whatever, we were only making \$3 per lunch. And then . . . we found out the trucking company that was only hauling it 15 miles down the road was making \$14 profit per lunch. Plus we had to put our name on the lunch, so we had to claim all potential liability, so it really wasn’t worth it. We did those lunches for 16 days and quit... (BR161 2011).

Business owners who did enjoy a brief post-spill boom commented that their companies will suffer long-term if commercial and sports fishermen don’t return at the levels they were present before the spill.

Local fishermen applied for cleanup employment through the Vessels of Opportunity (VOO) program, and some earned substantial amounts of money. Minority fishermen and small-boat owners, however, say they were generally excluded in favor of outside contractors, sports fishermen, and charter boat captains with larger, faster boats--a pattern also seen in other coastal communities (see Chapters 5 and 6, this volume). A newspaper employee summed up what many people in Plaquemines, with six years of distance from Katrina, have said:

Katrina was better than the oil spill because you could find your boat, repair it, and get back to work. You knew what to do; you can prepare for a hurricane. The reason there were so few fatalities in Plaquemines Parish is that people were prepared; they knew what to do. Everyone of a certain age here has lost a house in a storm. Now you don’t know what to do: the lawyer’s telling you one thing, the state another, and Feinberg another (CW477 2011).

7.2. POINTE A LA HACHE AND ITS ENVIRONS: INTRODUCTION

The fishing village of Pointe a la Hache is named for an axe-shaped bend (*pointe* in French) on the eastbank of the Mississippi, about 45 miles downriver of New Orleans. Pointe a la Hache has been the official seat of parish government since 1807, when Plaquemines Parish was created from the larger Orleans Territory. Once a bustling agricultural and shipping center with a multinational population, the community--and the eastbank in general—has shrunk over the last century. Hurricane Katrina further scattered its residents, and by 2010 Pointe a la Hache had 336 residents, 303 of whom are black (U.S. Census Bureau 2010).

Plaquemines Parish is unusual because 22% of its commercial fishermen are African-American (Laska et al. 2005). Many live or harbor their boats in Pointe a la Hache, the heart of Louisiana’s black fishing community (Goodman and Gonzales 2010; Powell 2008; Rodriguez 2011; Yeoman 2010). They are primarily oystermen who describe themselves as “little”

fishermen, in contrast to larger, more prosperous westbank oyster operations. Many families have lived there for generations and maintain extensive, reciprocal kinship networks; everyone is a cousin, as one resident said (CW401 2011).

The area also has a long tradition of activism against racial and economic inequities, bolstered by a strong religious faith--whether Catholic or Baptist. A pastor and community leader told reporters, "We're a self-determined community. . . . We're strong in our faith. We have all kind of disasters come our way, but because of a religious conviction, we say, you know, we walk by faith, not by sight" (Goodman and Gonzales 2010).

7. 2.1. Historical Narrative of Pointe a la Hache

Colonial settlement of Plaquemines' eastbank began in the 18th century, and by the 19th century the east side was described as "one of the richest fruit, truck farming, and rice districts in the state" (Buras 1991). Pointe a la Hache, one of Louisiana's oldest communities, was the center of the state's 19th-century rice industry; two of the parish's largest mills, the Socolo and Empire rice mills, were located there. 19th century Pointe a la Hache was "a very cosmopolitan community with residents from all over the world living and working there;" less than half of its 1850 population was Louisiana-born (Buras 1991). Its oldest families were descendants of French and German pioneers. French-speaking, Catholic free people of color (for example, the Barthelemy, Encalade, and St. Ann families) were established by the 1820s. African-American families named Griffin, Harvey, Riley, and Tinson settled a few miles upriver in Phoenix and other former plantation sites in the post-Civil War years. Italian immigrants settled there as truck farmers in the late 19th and early 20th centuries, and families such as the Ansardis, Ademas, and Lobranos became politically and financially prominent.

At the start of the 20th century, the Pointe a la Hache area had a population of 1,500 people, despite losing half of its residents in the Hurricane of 1893 (Buras 1991). The "Capital of Plaquemines" supported a variety of businesses--several fruit dealerships, grocery stores, taverns and coffeehouses, a hotel, and the *Plaquemines Protector* newspaper (Buras 1991). The Louisiana Southern train stopped there regularly, packet boats dropped off supplies at its wharf, and the village served as a shipping hub for the eastbank. St. Thomas Catholic Church, built in 1834, was the only church below New Orleans for years. (The church has been destroyed by storms and fires at various times, and the church building and cemetery moved from the eroding river bank in the first half of the 20th century.)

As parish seat, Pointe a la Hache's most important feature was its courthouse complex, an "unofficial town square and the center of life for residents of the town" (Buras 1991:9). All trials, voter registration, records searches, inquests, and other parish business (including at least one 19th-century execution) took place there, bringing a steady stream of customers to Pointe a la Hache businesses ("Indicator" 1850). The courthouse was the site of notorious political scandals and battles, including a 1943 takeover by the Louisiana State Guard (Conaway 1973).

The once-prosperous eastbank began a steady economic decline in the 20th century, as "hurricanes and labor problems killed the rice industry" (Buras 2002). Storms brought in salt water from the Gulf, killing crops, and higher river levees made it difficult to irrigate rice fields with fresh water. By the 1920s, Louisiana's rice industry had moved west to the prairies of southwest Louisiana. As the Mississippi encroached on Pointe a la Hache, buildings along the

riverfront had to be torn down, and the levee moved farther back (Buras 1991). Much of the town's earlier footprint has been swallowed by the river.

A key and still-controversial event was the Louisiana legislature's 1924 appropriation of 33,000 acres of land below Pointe a la Hache for the Bohemia Spillway, intended to safeguard New Orleans from flooding. Landowners in this tract were displaced, and access was cut off to all lands below Bohemia. Oil and gas were later discovered there and the parish levee board received mineral revenues for many years (Horne 2006). This prompted former landowners to speculate that the spillway was a ruse to grab mineral-rich lands. Years of litigation ensued before the state decided to return the tract to its former owners, and the issue still sparks resentment among locals.

A succession of levee breaks flooded local farmlands in the early 20th century, but the most destructive crevasse was manmade. In 1927, the Great Mississippi River Flood threatened communities all along the river. Powerful New Orleans businessmen convinced officials to protect the city by dynamiting the levee downriver at Caernarvon Plantation, near the border of Plaquemines and St. Bernard parishes. 10,000 small farmers, trappers, and fishermen from the two parishes "trudged out of the lower parishes as if leaving a war zone" (Barry 1997) and were evacuated to New Orleans and Gulfport. Engineers used numerous dynamite charges to create a 2,600-foot-wide channel to the Gulf, inundating homes and farms. The resulting damage was estimated at \$5 million (Barry 1997). Oyster grounds in Breton Sound were flooded with freshwater from the crevasse and the Bohemia Spillway, destroying about a third of Louisiana's entire oyster crop. In 1928, there was no harvestable crop on oyster leases in this area (Davis 2010). Regional fishing grounds shifted, and the parish economy never fully recovered.

By the 1990s, Pointe a la Hache was described as a sleepy little village whose economy centered on fishing, a small furniture factory, and the courthouse (Buras 1991). Arsonists destroyed the courthouse in 2002, and Hurricane Katrina closed the furniture business in 2005. Loss of the courthouse and the financial traffic it created "devastated the economy on the East Bank and destroyed the icon many locals considered the symbol of home" (Buras 2002). The brick shell still stands, but the courthouse has not been rebuilt a decade later. Parish government moved temporarily to Belle Chasse, and westbank politicians have proposed making the change permanent. Parish president Billy Nungesser commented that moving the parish seat to Belle Chasse "would help safeguard our court records and move the courthouse closer to our population center" (Rioux 2010). However, voters recently rejected the proposed move for the third time, because there is no consensus on a new location. (Lower westbank residents do not want the parish seat in Belle Chasse, either). Pointe a la Hache residents believe that local businesses might revive if the courthouse were rebuilt and *used* as a courthouse, instead of becoming a museum as parish leaders have suggested. A Pointe a la Hache storeowner told a visiting journalist in 2010, "You could call this a dead town. It used to be pretty busy when you had people catching the ferry to go to court. But there's not really much reason for anyone to come over here" (Roosevelt 2010).

Since the early 20th century, the eastbank's population has been predominantly African-American and Creole. Katrina chased the few remaining white residents of Pointe a la Hache upriver, and now the parish is divided: communities north of the White Ditch River Diversion are primarily white; those below the diversion are African-American and Creole. Generations of black and Creole families there have made their livings through a seasonal cycle of fishing, trapping, gardening or farming, and carpentry or concrete work; women have contributed to the family income as seamstresses or teachers. One community member, whose family has lived

there since the early 19th century, describes Pointe a la Hache when he was growing up 50 years ago:

This place here was a self-sustaining place. My grandfather and his brothers, not only did they have this piece....two-and-a-half acres wide, forty deep. And they farmed rice, everything. I mean even as kids we used to get behind the horses and the plow while my uncles would plow the rows all over back up in here and pick up the potatoes and pile them up and stuff. We had the pear trees when I came up, we had just about any fruit you could think of on this place.... (CW401b 2011)

Pointe la Hache offers fewer economic opportunities today. Some residents work for the parish or sheriff's department, others are employed at the coal transfer plant half a mile up the road in Davant, a few work at refineries or chemical plants. According to a pastor and community spokesperson, virtually none work offshore. He believes that the typical offshore schedules of 7 days offshore, followed by 7 days at home (or 14-and-14) takes the men away from their families for too long; they prefer to fish in the bayou and be home at night (CW522 2011). One constant has been that, in hard times, local families could fall back on the bayou or the land for a living (CW401a 2011; Davis 2010; Horne 2006). A local activist told reporters:

People here always had to be independent. Because of institutionalized racism and segregation in this parish, the African-American people were not allowed in the mainstream, so that means they had to be independent. Most of the African American people in this community survived... They created their own schools, their own institutions, their own churches, in order to survive. So you had villages, and you had like a communal kind of living taking place. And they've always been independent. (Goodman and Gonzales 2010).

Fishing is Pointe a la Hache's economic linchpin and for most residents, a family tradition. A generation or two ago there were hundreds of African-American fishermen working fulltime or part-time in the industry (Lee 2010; Yeoman 2010). An out-of-work oysterman told reporters after the oil spill, "Basically everyone's forefathers, grandfathers, that's what they did, and it was passed on from generation to generation. That's how we learned to do what we do" (Yeoman 2010). According to a local religious leader/spokesperson, an estimated 80% of lower eastbank residents make their living from commercial fishing, or fish to supplement other jobs (CW427 2011).

Oysters are the primary commercial harvest, as the village is close to productive natural reefs in Breton Sound. Many locals have no oyster leases of their own; they fish from public reefs during the allotted season, or work for leaseholders in return for a percentage of the crop. Fishing boats are generally small, and harvesters often "coon" oysters by hand in shallow water, or use hand-cranked dredges rather than mechanized ones. Many trawl for shrimp as well, selling to local seafood dealers at the dock. Reciprocal social networks require sharing much of their catch with relatives and neighbors. One local oysterman commented that when he goes shrimping, "If I bring in 2,000 pounds of shrimp, I'm happy if I sell 1,000 pounds" (CW401a 2011). The remainder goes into the family's freezer or is given away to relatives who depend on this food source.

The number of African-American fishermen has dropped steeply in recent decades. Minority fishermen on the eastbank comment that they are marginalized in an industry controlled by larger, politically influential oyster farmers who hold thousands of acres of leases. Oyster fishing policies, they point out, have typically favored larger operators, most of whom are white. Fearing that they are being squeezed out of business, these “little” oystermen periodically engage in legal battles against bigger oyster cultivators. In the 1970s, larger oyster farmers lobbied for a law banning hand dredges on oyster boats, used mainly by minority fishermen, on the grounds that they damaged water bottoms. A grassroots organization called Fishermen and Concerned Citizens (FCC), based largely in Pointe a la Hache, was created to fight that law and succeeded in getting it reversed (Yeoman 2010).

The opening of the Caernarvon River Diversion, one of the state’s largest freshwater diversions, in the 1990s proved disastrous for eastbank oystermen. Salinity levels had climbed in Breton Sound’s public and private oyster grounds, decreasing oyster reef productivity and encouraging predators (McGuire 2006). Oystermen worked with engineers to plan the Caernarvon diversion, touted as a fisheries enhancement project intended to restore healthy salinity levels. In August 1991, freshwater began being flowing into Breton Sound under a “modest flow regime” and productivity improved (McGuire 2006; Davis 2010). In 1993, however, the Louisiana Department of Natural Resources (LDNR) opened diversion gates full-bore, doubling the flow rate in an effort to hasten new land formation downriver (Davis 2010). This was devastating for minority oystermen whose leases fell within the “red line” of decreased salinity. High oyster mortality led to litigation against LDNR and the state for losses. Some westbank oyster farmers who suffered no oyster losses on their own leases joined the suit as plaintiffs. Although oyster leaseholders initially won the suit in local courts, the Louisiana Supreme Court overturned the judgment on appeal.

In the wake of litigation, LDNR placed a moratorium on issuing new oyster leases to replace damaged ones (McGuire 2006; CW401b 2011). The ongoing moratorium has severely impacted eastbank minority oystermen, who had smaller leases to begin with. Westbank oyster farmers, along with LDNR, approached Congress for funds to relocate oyster beds damaged by the Caernarvon diversion; they were granted \$9 million to move to new leases (Horne 2006). Eastbank oystermen have also proposed moving their leases from damaged areas to new areas. A community activist commented, “Some oil companies are deeply affected by this [proposal] and we’re negotiating with them. The oil spill threw another wrench in the works” (CW427 2011). Minority fishermen expressed the belief that oil industry lobbyists have played central roles in denial of new leases. An eastbank oysterman said:

And they basically want the right to move around out here, without compensating the oyster farmers when they have to go across the oyster beds. In all fairness to them, there is a bad situation out there that does handcuff them in a way. But they should have been sitting down working with us to develop policies to protect them and us. Instead, they took this hardnosed stand and saying “Let’s just get them out of our way and destroy them. We’re going to use these freshwater diversions to our advantage.” So I believe there are hidden agendas (CW401b 2011).

A local pastor emphasized the significance of commercial fishing for community members:

Once you kill the fishing industry, then you have devastated their whole life, because most of these people, that's how they survive. Their whole living depends on the water environment. That's all they know, every day. Some of these guys, you know, they fish every day—Sunday, Saturday—all day, because they own their own oyster beds. And so, right now, you're destroying their lives. (Goodman and Gonzales 2010)

7.2.2. Effects of Hurricane Katrina on Pointe a la Hache and Environs

Destructive hurricanes have always been a fact of life in Plaquemines. In 1965, Hurricane Betsy demolished more than 500 homes on the eastbank alone, buried the area in mud and debris, and dropped broken fishing boats all across the parish (Buras 1995). Forty years later, Katrina caused even more extensive damage. Homes and businesses on the lower eastbank were decimated, and the town's few remaining white residents moved upriver or to the westbank. Fishermen again lost their boats and oyster crops; Katrina killed as much as 70% of public oyster reefs east of the Mississippi (Lee 2010). Most black fishermen were already “on the margins of solvency” (Jeremy Stone in Lee 2010), making it difficult to replace lost boats and other equipment. Heavily-damaged St. Thomas Church, a community institution of almost two centuries, was closed by the archdiocese, perhaps permanently. Parishioners faced a choice between traveling 30 miles upriver to a traditionally white church where they felt unwelcome, or crossing the Mississippi to attend St. Patrick's Church in Port Sulphur. They petitioned insistently for their church's repair, and St. Thomas re-opened in 2009.

The parish was slow to repair many Katrina-related infrastructure problems, arguing that they “don't want to overbuild” for the eastbank's shrinking population (Powell 2008). Lower eastbank communities no longer have natural gas service or landline phone service, and the closest medical facilities are across the river in Port Sulphur. Pointe a la Hache currently has only two retail businesses: a small convenience store and bait shop at Beshel's Boat Launch, and DJ's One Stop, a store and lunch counter next to the burned-out courthouse. Both businesses depend on commercial fishermen and sports fishermen for much of their income.

In the years since Katrina, cramped FEMA trailers have been replaced by mobile or modular homes. A local clergyman points out that things might “look more normal from the outside” now, but three families or generations might share a doublewide home (CW427 2011). Louisiana's Road Home program, intended to provide compensation to homeowners for damages from hurricanes Katrina and Rita, was difficult for rural residents to navigate. Many lower Plaquemines individuals own their houses, but their land, passed down over many generations, belongs to the whole family. The pastor says:

And so, because of those dynamics, Road Home prevented a lot of community people from applying for the program, because you had to get all kind of documentation in order to prove that you own that land... We saw how the government neglected the city of New Orleans, so we knew in Plaquemines Parish we wouldn't stand a chance [to] survive. So we came together as a community and started a program called the Zion Travelers Cooperative Center to rebuild our community. And we're saying we had very little government help in it (CW427 2011).

Local residents, he says, were “able to rebound after Katrina” because of a sense of “community unity ... and understanding that we’ve got to work hard, because the federal government will never come in on a white horse to rescue us” (CW427 2011).

7.2.3. Specific Effects of the Spill on Pointe a la Hache

Pointe a la Hache’s small African-American fishing operations experienced many of the same post-spill socioeconomic effects as other coastal fishing communities (see Chapters 5 and 6, this volume, for example.) Some factors, however, made the local impact particularly severe. The local economy is not diversified, and virtually everyone is dependent on the commercial oyster and shrimp industries in some way. Another factor is the location of their oyster beds, in the path of both oil contamination and major river diversions. Eastbank fishermen say that oil entered estuaries such as Spanish Bay and Bay Gardene, home to some of the state’s most productive natural oyster reefs. A local oysterman explained:

The oil came in... at the point at which salt water and river water meet And the river water was pushing the oil out of the bay. It did come in. But from Bay Crabe, Bay Gardene, to Spanish Bay was solid fresh water. The oil came in through the back, through Bay Gardene.... all up in the bayou back, straight back of here (CW401a 2011).

Freshwater pumped in from the Caernarvon, White Ditch, and Bohemia diversions pushed the oil out, they say, but killed their oyster beds.

The cooperative nature of small-scale oyster fishing and share cropping made it difficult to produce trip tickets and other documentation for compensation. The few locals who got hired for VOO were obligated to share this employment with captains and deckhands they regularly employ. As one oysterman commented, they know they’re going to need these workers in the future.

Many minority fishermen had limited educational opportunities or dropped out of school to fish for a living; they have scant economic resources to fall back on (especially after Katrina) and few viable retraining opportunities. A long tradition of self-reliance and independence made the prospect of accepting financial aid such as food stamps very difficult for many, exacerbating the frustration and anxiety of the “BP drama” (CW427 2011). Stress is making people sick, but there are no medical facilities on the eastbank, and most people don’t have health insurance. One multi-generational community member and local oysterman said:

We believe in working, and [our parents] taught us that. They put those values inside of us. And just like my grandmother said, one thing she asked of all of us: “Do not be somebody that sits down and waits on the welfare check.” We always pride ourselves on being a recession-proof community because we lived off the land and we’ve always made sure we had that to survive.... We have our pride, the pride our ancestors installed in us, and no, damn it, please for God’s sake do not come in here thinking welfare is going to solve our problems. We don’t want it, we don’t need it, we have what we need, our ancestors made a way for us to make sure we are a self-sustaining community (CW401b 2011).

A number of fishermen commented that Feinberg and BP did not comprehend the degree to which local people depend on the bayou to feed their families and social networks. Subsistence fishing is crucial here, as well as in Native American and Vietnamese communities. Oysterman CW438 spoke of a distant relative now serving in the military and stationed elsewhere, who counted on CW432 to take care of his five children. It gets expensive to have to provide them with seafood—"I'm one and they're five"--but it's expected of kin (CW438 2011).

Pointe a la Hache's few retail businesses are stagnating because almost all of their customers are commercial or recreational fishermen. Sharon Domingue, who opened DJ's One-Stop with her husband in 2009, told a reporter that they remain open for the sake of their community: "It's not about me, it's about the people, especially the older people. If I close, there's no place for them to buy milk. There's no place for them to buy bread. I have to do this for my community" (Domingue in Rioux 2010).

Local residents reported that the oil spill compensation process was "mirroring" (CW401a 2011) the same problems that they saw in post-Katrina economic recovery efforts: the focus seems to be on big businesses, tourism, and casinos, to the exclusion of commercial fishermen. A religious leader said, "It went from being about fishermen being out of work to being about business and tourism—but what about the little fishermen? . . . When the state got the BP money, they pushed it on tourism, and the local government is looking at what they can do for coastal restoration" (CW427 2011). To the extent that legislators were paying attention to fishermen, a local activist said, they were focusing on large-scale oyster farmers who can file million-dollar claims against BP, not subsistence-level fishermen such as those in Pointe a la Hache (CW427 2011).

The community's response to the BP oil spill reflected its history of political organization and activism. Grassroots non-profit organizations such as Fishermen and Concerned Citizens, the Zion Travelers Co-op (formed after Katrina), and the newly created Go Fish (Gulf Organized Fisheries in Solidarity and Hope) held press conferences, forums, and other events to call attention to minority fishermen. Local fishermen and activists flew to London to protest the compensation process at BP's first annual post-spill shareholders' meeting, and met with legislators in Washington, D.C.

7.3. EMPIRE AND ITS ENVIRONS: INTRODUCTION

Empire, a small village on the lower westbank of the Mississippi, is an important gateway to Gulf fishing grounds on both sides of the river. The community, with a shipyard and marina, has always housed more boats than people. The Empire CDC, which includes neighboring settlements such as Nairn, had a 2000 population of 2,211 residents, of whom almost two thirds (60.79%) were white, a third African American (33.79%), and a small minority Asian (2.76%). Much of Empire's pre-Katrina population consisted of French, Croatian, and African-American families, but some Vietnamese shrimpers have worked and lived in the Empire area since the 1980s. (Many more Vietnamese and Cambodian fishermen dock there.) In the aftermath of Katrina, the population has dropped to 993 residents, but Empire remains home port to some 2,000 boats (Tesvich 2008). Many commercial fishermen who moved to Belle Chasse and other westbank communities commute regularly to their boats in Empire.

Empire's economy is based almost entirely on commercial and (to a smaller extent) sport fishing. With more oyster beds within a 30-mile radius than any other Louisiana community, the Empire area is one of the country's largest ports of oyster landings (Tesvich 2008). Many westbank oyster farmers have extensive oyster leases passed down for generations, in sharp contrast to most of the eastbank's "little" fishermen. Empire is also a primary landing for Gulf shrimp, and a menhaden fishing fleet and processing plant have operated there since the 1940. Delta Marina attracts a stream of recreational fishermen and charter boats, and holds annual tourist events such as tarpon rodeos.

7.3.1. Historical Narrative of Empire

For many years, Nairn Plantation, a sugar and rice plantation, was the most significant place in the Empire area (Stringfield 1989). The plantation was subdivided into smaller plots after the Civil War, and some of these lots became prolific citrus groves. Indeed, Croatian pioneers such as the Cognovich and Vidacovich families had begun growing oranges in the Nairn area as early as 1850, and by the late 19th century, and by the late 19th century, Nairn was the tip of lower Plaquemines' Orange Belt (Stringfield 1989). The Empire Post Office was established in 1878 along the last major bend of the Mississippi River, about four miles downriver of Nairn (German 1990). Its name probably derives from the term "Empire Parish," popular among Plaquemines planters by the mid-19th century (Stringfield 2012; Buras 1991). Most of Empire's 700 residents at the turn of the 20th century were French and Anglo-American, with surnames such Buras, Stockfleth, and Cosse (U.S. Census 1900).

Oysters and Croatians have played prominent roles in Empire's history and economy. Men from Croatia's Dalmatian coast, then part of the Austrian Empire, began immigrating to south Plaquemines before the Civil War. Some, like the Cognoviches and Vidacoviches, became prosperous plantation owners or citrus growers (Vujnovich 1974; Stringfield 1989). Most, though, came specifically to fish oysters, an occupation they had learned in Dalmatia. Early Croatian immigrants discovered that wild oyster reefs, primarily located on the east side of the river, were overcrowded and produced small, skinny oysters. Luka Jurisich and other Croatian pioneers began taking seed oysters from the wild reefs, carrying them to the west side of the river, and re-planting or "bedding" them in areas with ideal salinity levels and few wild oysters. Their fat, salty-tasting cultivated oysters became famous at a time when consumption of raw oysters was skyrocketing in the New Orleans area (Davis 2010; Horst 2011). An 1892 newspaper article makes it clear that Croatians (then called Austrians) dominated oyster farming in the Bayou Cook area, reporting that "bedding is done here almost exclusively by... sons of Austria" (Horst 2011:53-54). Later Dalmatian oystermen contributed other new techniques such as using dredges to harvest oysters.

Most 19th-century Croatian immigrants lived in camps on remote bayous such as Bayou Cook, Bayou La Chute, and Adams Bay. Bayous Cook and La Chute became substantial "villages in the marsh" by the late 1800s. Oystermen lived near their oyster beds but visited Empire, the nearest river settlement, to socialize, stock up on supplies, and deliver oysters to packet boats for delivery to New Orleans markets (Vujnovich 1974). By the early 1900s, Empire had a busy oyster cannery that expanded the market for local oysters (Davis 2010). Hurricanes in 1893 and 1915 wiped out the fishing camp settlements of Bayou Cook and La Chute, killing hundreds of people. Many survivors moved inland to Empire or to New Orleans. By 1920,

Croatian surnames such as Jurisich, Hihar, Cognevich, and Zuvich appear in the Empire area census (Stringfield 1993; USGenWebProject 2012a.; USGenWebProject 2012b).

Oyster cultivation took a large step forward in the early 1900s with construction of the Empire Lock on Doullut Canal. Until then, carrying seed oysters across the Mississippi River had been a time-consuming and dangerous task, particularly when oyster boats were heavily loaded and sitting low in the water. Fishermen used a maze of waterways to cross the river and reach natural oyster reefs in the Gulf. The privately-owned Empire Lock and its companion Ostrica Lock in the early 1900s provided a much faster and safer route across the river, and Empire became a key link in the seafood supply chain to New Orleans (Vujnovich 1974; Davis 2010). By the 1930s, more than 200 vessels used the navigational locks (Davis 2010). Fishermen paid a toll to use the locks until the state purchased them in 1932, and the U.S. Army Corps of Engineers rebuilt them. The Empire and Ostrica locks remain the only navigational locks downriver of New Orleans, and are heavily used by fishermen, oilfield crew boats, and pleasure boats.

The advent of sulfur and oil exploration in Plaquemines' marshes in the 1930s and 1940s led to clashes with oyster farmers already established there. There are stories of a local Croatian oysterman storming into an oil company office and frightening a worker by pounding his fist on her desk, then saying to an oil executive, "See? That's what your dynamite does to my oysters!" Oyster lease owners could and did sue oilfield companies for damages to their water bottoms (the basis for the 1990s lawsuit against the LDNR for oyster mortalities from the Caernarvon Diversion). But there were mutual benefits as well; mineral companies dug canals through the marshes that oystermen used as shortcuts, for example. Mineral companies also hired Croatian oyster farmers to help them navigate local waterways and oyster leases as they laid pipeline and moved drilling rigs (CW492b 2011). A wave of Croatian refugees fleeing Communist Yugoslavia arrived in Empire during the post-World War II years, joining Croatian families who had been farming oysters for several generations. These influxes continue as young men come to apprentice with Croatian-American uncles and cousins. Consequently, local Croatian culture and language are continually re-invigorated.

African Americans are an important but largely undocumented component of Empire's cultural mix and history. For many years, the Chicken Shack was a popular local dining and dancing spot for black parish residents; it was also the site of a 1960s police raid that led to civil rights protests. A number of African-American residents today are employed by the local menhaden industry, as are Creoles, Native Americans from Grand Bayou, and a number of Latinos (CW464 2011).

In addition to oysters and shrimp, Empire is one of the most important menhaden landings in the country, accounting for about a third of all Gulf pogy landings (Davis 2010; see Table 7.1 for total landings for Empire-Venice). Empire's first large pogy processing plant was built in 1949 by Wallace Quinn (Davis 2010). In the 1980s, the older company was joined by a competing Dutch-owned firm. The two companies merged in the early 1990s to create Daybrook Industries, the largest single employer in lower Plaquemines. Although relatively small compared to other menhaden businesses such as Omega Protein, Daybrook has a fleet of 11 250-foot pogy boats and eight Cessna planes, as well as a fishmeal processing plant in Empire. The planes track schools of fish from the air, and smaller vessels circle and trap the fish with large seine nets before transferring them to the large menhaden boats. At the dock, high-powered hoses move the fish from boat to processing plant, where they are ground into fish meal used in pet food and fertilizer (Davis 2010; CW 464 2011). Daybrook's 330 job pools include boat

captains, fishing crews, aircraft personnel, a fishnet-making department, a grinding plant and warehouse, and a repair and maintenance department. The menhaden fishery has grown into a major industry because fish oil and meal are very marketable, making Empire one of the most important landings in the country (Davis 2010). The Louisiana Wildlife and Fisheries Department estimates that the state’s economy would lose almost \$160 million if the Daybrook fishery and processing plant were to close (Davis 2010).

Table 7.1. Landings at Empire-Venice, LA

Year	Millions of Pounds	Millions of Dollars
2011	531.5	99.2
2010	353.5	59.4
2009	411.8	67.1
2008	353.2	62.9
2007	323.1	73.5
2006	285.7	41.1
2005	170.8	39.4
2004	379.0	60.2
2003	400.0	50.8
2002	398.9	54.3
2001	370.7	59.1
2000	396.2	61.6
1999	435.0	64.0
1998	328.0	38.3
1997	395.9	57.8
1996	316.5	45.4
1995	298.1	51.1
1994	431.7	60.1
1993	335.4	52.3
1992	276.5	58.7
1991	309.4	50.2
1990	244.2	46.3
1989	272.7	49.2
1988	297.2	67.7
1987	357.4	60.1
1986	317.6	47.1
1985	224.5	34.3
1984	383.5	41.6
1983	281.9	31.8
1982	267.3	36.4
1981	221.0	30.5

Source: NMFS n.d.

Sport fishing has also been a growing force in a parish long known for its excellent fishing; fishermen can fish inshore or offshore, and catch a wide variety of fish. (A local tourism slogan boasts, “You can fish anywhere, but you can *catch* fish in Plaquemines Parish.”) In fact, the parish’s tourism industry rests almost entirely on fishing. Though smaller than marinas in Venice, Empire’s Delta Marina calls itself south Louisiana’s “premier saltwater fishing attraction.” Several charter boat captains operate out of Delta Marina, taking fishermen to nearby oil and gas platforms to fish for redfish and speckled trout. Some go farther offshore for tuna,

king mackerel, and red snapper. Empire, like other growing sports fishing centers, hosts periodic fishing tournaments and tarpon rodeos, and “Kayak Fishing Tour” events

7.3.2. Effects of Hurricane Katrina on Empire and Environs

Empire, like Pointe a la Hache, experienced massive destruction from Hurricane Betsy in 1965. Four years later, Hurricane Camille smashed the lower westbank, leaving the entire region below Port Sulphur flooded for months (Buras 1995). Most residents eventually returned and rebuilt their homes and businesses.

In August of 2005, Hurricane Katrina’s eye passed over Empire, pouring a 22-foot wall of water onto it and obliterating most of its buildings and infrastructure. Homes and businesses were washed off their foundations, and wood-framed St. Ann’s Catholic Church was turned sideways. The storm drove oyster luggers and shrimp boats on top of each other, and crushed docks and ice houses, effectively shutting down commercial fishing. Daybrook’s menhaden plant was flooded with several feet of water, and its 11 boats beached (CW464 2011; Davis 2010). Armed deputies kept residents out of the area for weeks because of safety concerns. Bridges had washed out, and the storm surge had deposited live electrical wires, houses, and boats on Highway 23, the only land route into the parish. Iconic photos of post-Katrina Plaquemines Parish show two huge Daybrook Industries poggy boats stranded on top of the Empire highrise bridge (Figure 7.2).



Figure 7.2. Poggy boat stranded on the Empire bridge after Hurricane Katrina
Source: NOAA 2005

Some fishing families who evacuated on their boats returned within a few days to survey damage, and their descriptions were apocalyptic—a drowned body on a wharf, and no recognizable landmarks because of floodwaters trapped between front and back levees. One Croatian-American woman and her oyster farmer husband returned two days after Katrina, and paddled from Empire to their home in Nairn in a borrowed pirogue. She wrote: “What we saw

was surreal. We had left a bustling fishing village two days earlier to come back to what looked like a scene from an atomic blast” (Cibilich 2005). Fishing boats remained buried in the mud of Empire shipyard for months.

An estimated half of all fishing boats were lost, destroyed, or seriously damaged. Shrimp boats, lighter than oyster boats, were especially vulnerable; it was reported that only 20% of the parish’s 786 registered shrimp vessels were operational post-storm (Life Stream 2006). Although the Coast Guard initially agreed to salvage all 2,300 commercial boats beached or sunk by hurricanes Katrina and Rita, they later reversed this decision and said that many commercial fishing boats were outside their jurisdiction (Brown 2006). Boat owners were left with few resources for rescuing their grounded vessels. Cambodian and Vietnamese fishermen faced additional difficulties; they could not read English-language signs about Coast Guard assistance, and boat ownership agreements were often complicated (Brown 2006). Much of Empire’s civic and public infrastructure has not yet been rebuilt. There is no grocery store, no gas station, no hardware store or civic center. Empire lost landmark businesses such as Tom’s Place, opened by the Morovich family in 1950, when its owner moved to the Northshore after Katrina. The only remaining restaurant is in the renovated and re-opened Delta Marina. St. Ann’s church was repaired and reopened in 2011. Moreover, the village remains essentially cut in half by the Empire Canal. Before Katrina, a small drawbridge over the canal connected the upper and lower parts of the settlement. Officials took down the damaged drawbridge after Katrina and have not replaced it. A local oysterman wrote in 2008, “By all accounts, the bridge was repairable, but the government people said they would build a new bridge. So far that hasn’t happened, and locals have to drive three miles around on the Highway 23 high-rise bridge to get across the 150-foot navigation canal “(Tevich 2008). The canal remained unbridged in 2012.

7.3.3 Specific Effects of the Spill on Empire

During the BP oil spill, seafood landings came to a halt, and oyster landings did not resume for a year. Oyster farmers in Plaquemines, just beginning to recover from Katrina in 2010, faced many of the same concerns as those in other coastal areas: major losses from fresh water diverted to push oil offshore, and few oyster spat after the spill. Peter Vujnovich Jr., a third-generation Croatian-American oyster farmer, docks his oyster luggers in Port Sulphur and farms oyster leases handed down from his grandfather. He lost 70% of the oysters on his leases, “all because of freshwater, not oil” (Horst 2011:50). The degree of loss depended on lease locations, but many westbank oystermen fared better than eastbank minority fishermen; their leases were more extensive and scattered, and many had some financial reserves. Some oyster-rich marshes off the Plaquemines’ coast, particularly Bay Jimmy, were still visibly oiled and dying two years after the spill, and residents feared the damage was hastening marsh erosion (Schleifstein 2012). On the impact of the oil spill, a Croatian-American oyster farmer with beds near Empire said, “You hope for the best and expect the worst. I’ve seen a lot of good cleanup, but in Bay Jimmy I still see marshes soaked with oil” (CW492b 2011).

At the time fieldwork for this study ended, westbank oyster farmers were recovering from the spill although they would likely feel its impact for several more years. Pete Vujnovich, for example, estimated that it would take his beds three years to regain a normal production level, and five to reach peak production (Horst 2011). Oystermen’s concern was focused on coastal restoration plans that proposed a major freshwater diversion at Empire, as well as a number of

new diversions in other parts of the parish (far more than any other parish was slated for) (CPRA Master plan 2012). Fishermen expected that this would permanently damage their livelihoods, and supporting businesses, by drastically altering the salinity in surrounding marshes (Tesvich 2008). Vujnovich commented, “My biggest fear is that they will build freshwater diversions so big that they destroy the oyster industry” (Horst 2011).

Empire’s menhaden fishery was also impacted by the oil spill. According to a company executive it had “a devastating impact” on the company, whose plant is only 40 miles from the Macondo well (CW464 2011). The 2010 pogy season, which runs from April to October, had just begun when the oil well blew out and many coastal waters were shut down. The fleet had just one fishing day before the crisis began. Some waters opened on July 29, near the end of the season. Before the oil spill they were expecting their best season ever; instead they had their worst season ever (CW464 2011). The company did everything it could to help its employees through the crisis, the company officer said, but at the April 2011 Blessing of the Fleet, a “parade of fishermen” approached the priest to ask for additional blessings for themselves because they were so worried about the future (CW464 2011). Some longtime employees left the company to work on the oil spill cleanup. The parish newspaper reported that although the 2011 season was initially “uncertain as the parish continued its recovery from the BP spill,” pogy plant workers “pressed on, and managed to have one of the biggest seasons on record” (Gonzales 2012). One employee was honored for his record catch of a billion fish in the 2011 season.

Charter boat captains had a mixed experience. They were unable to take clients fishing at all in the summer of 2010, but some say they started fishing, or could have, by that fall. Many were too busy working for the cleanup efforts, however. Charter boat captains were hired because they operate fast, relatively large boats and generally had good connections to marinas, where much of the activity was based (CW508a 2011). One local captain said:

I have a fast boat, so I was running Coast Guard, media, and BP officials around the parish, either just transporting them or going out looking for oil. Yeah, I’d say there were 40 to 50 charter captains like me who were mostly local working the cleanup. (BR059 2011)

A fellow charter captain and friends who worked on the cleanup from June 2010 to early 2011 added:

They hand-picked fast boats to do some high priority work. We were medic boats and we went back and forth between the marina and the barges. They liked us because we would go out on the water when no one else wanted to. (BR062 2011)

Some found that their charter business fell off afterwards, in part because of high river levels in spring of 2011. A charter captain who often works out of Venice, said in 2011:

Well a few months ago I would’ve told you that fishing didn’t seem to be as badly affected as I would’ve thought. Lots of my customers are repeat customers and they were all calling me last summer [2010] asking me to take them out on the water and I had to keep explaining that all the waters were closed..... I started taking bookings for next year around that time [mid-September, when some inshore areas opened] and it looked pretty good, probably around 50 to 60 days booked, but I guess those are my most faithful

customers because I've hardly gotten any more bookings and I average around 140 days on the water. And thing is I give other charter fishermen in the area, like [BR050], around 30 to 40 days of work, so they feel it when I'm slower too. (BR059 2011).

In addition, charter boats from Alabama and Florida got hired for VOO, and through that cleanup work discovered "how good the fishing is here and they're getting in on the game" (BR059 2011). Some out-of-state charter captains had begun offering fishing trips out of Venice, taking business away from locals. A local captain complained:

It's not like I can just pick up my life and go do this somewhere else. The best fishing in the world is right here in Plaquemines Parish. I mean like the other charter fishermen who don't live here usually have other jobs and even the Croatians, the oystermen, they can go back home, but this is our home." (BR059 2011)

Even before the spill, a majority of charter boats operators (as many as two thirds, according to charter captain BR059) lived outside the parish. This makes it difficult to gage socioeconomic effects of a post-spill slowdown on local communities.

Although fin fishing is productive now, captains who worked in VOO are worried that oil and dispersant residue may affect spawning:

I'm not worried about the big fish. It's how the babies are doing that worries me. Both trout and red fish lay their eggs on sandy bottoms in the bays around here. ... But I know from working the cleanup that there's a lot of oil that has been sunk to the bottom of the bays because of the dispersant they used. I've seen tar balls come up to the surface that are as big as houses. No kidding. So if there's oil all on those sandy bottoms, the mamas can't lay their eggs this year and that's going to be really bad for us in a couple years. (BR060 2011)

7.4. PORT SULPHUR AND ENVIRONS

The largest of the three Plaquemines study sites, Port Sulphur is also the youngest. Built by Freeport Sulphur as a company town and transport hub in the 1930s, the town and its environs now incorporate older communities such as Homeplace, Orange Grove, Potash, and Happy Jack. Port Sulphur's sulfur-based economy declined when Freeport's operations slowed in the 1980s, and the company left Port Sulphur in 2000. Current industries include oilfield support businesses, commercial fishing docks, seafood processing, sports fishing charters, trucking, and construction, among others. Port Sulphur has the only medical facilities in lower Plaquemines.

The majority of the residents of this census-designated place are African-American, Creole, or French-Indian. Established family names include Riley, Carson, Harvey, Sylve, Ancar, Barthelemy, Denet, and Philips. A number of Croatian oyster farmers also lived in Port Sulphur before Katrina, and some have rebuilt homes there, or dock their boats in Port Sulphur and commute from Belle Chasse.

7.4.1. Historical Narrative of Port Sulphur and Environs

In 1932, Texas-based Freeport Sulphur Company acquired mineral rights to a sulfur dome in Lake Grand Ecaille, a productive oyster estuary. Mining the sulfur required construction of a “massive industrial city,” including a power plant, on pilings in the marsh, and a ten-mile-long canal through the marsh to ferry lumber and steel to the mine (Davis 2010). Soon there were over 1,000 men working in the Grande Ecaille mine, many from Texas and other states. Transportation to and from the mine was difficult, so work crews were initially ferried from Lafitte and lived onsite in houseboats.

The mine was tremendously productive, supplying more than half of Freeport’s total sulfur in the 1930s (Conaway 1973). Its first months in Plaquemines were difficult, though. Badly underestimating political boss Leander Perez’s power, Freeport “originally made the mistake of considering Plaquemines to be a one-company parish with itself as sole proprietor” (Conaway 1973:25). When Perez discovered minor errors in surveys of marshlands leased to mineral companies, he used them to question the validity of existing sulfur and oil leases. Freeport “soon found that it had three and a half million dollars invested in a mining operation on land of unknown ownership” (Conaway 1973:25). The company refused to pay royalties until the ownership question was resolved, and began laying off Plaquemines employees to hire outside workers. In response, Perez convinced the state to increase the severance tax on sulfur from 60 cents to \$2 a long ton (Conaway 1973). Freeport had to concede defeat and made a settlement with Perez. They never challenged him again.

Although the company brought in its own engineers and other professionals, it employed local oystermen in low-level jobs. Burt Turlich described how his father, a Croatian-American fisherman, was hired in 1933, just as the Grand Ecaille mine was starting up (Turlich 2002). Burt followed his father into the company in 1955, and worked for Freeport until retiring in 1991. He had a number of jobs with the sulfur company, and also continued to do seasonal fishing. Turlich said:

They had people workin’ for oil companies, a lot of people...A lot of ‘em was doing like I was doing, too. I was working for them and in my off time I was, you know, fishing, shrimping, and stuff like that. Back then you didn’t have all that problem with the oyster fishing either, you know. You can lease now, but back then it was okay to go out and fish on your own and sell, you know. That was in the, ‘40s and ‘50s, but now everything is leased.... (Turlich 2002)

Freeport built Port Sulphur in 1933 for two purposes: to provide a comfortable home for its workers and their families, and to serve as a logistical facility for storing and shipping mined sulfur (Davis 2010). The company bought a marshy 1,100-acre tract, a former citrus grove on the westbank of the Mississippi, accessible by both railroad and Highway 23. Filling the low-lying site with dredged dirt, they began building the town. Designed to provide housing for 125 families, the townsite featured colonial-style houses with 27 different designs, and cul-de-sacs that kept traffic at a minimum (Davis 2010; Lincoln, n.d.-b). The most important employees lived near the river (Lincoln 2008). A boarding house housed single men, and a brick community lodge (now the Plaquemines government building) was built for dances and other special events. Freeport rented its houses to employees for a modest rent and provided municipal services such as sewers and water systems, garbage collection, and private security. The company also

performed all maintenance on the houses. According to Burt Turlich, “So all you did was rent it and they did all the work. You see, Freeport had a crew that’d do all the work. Any plumbing thing, any roofin’, any windows bust, they do all the work... You were like a big family there, you know” (Turlich 2002). Resident Lois LeJeune told journalist Jere Longman, “If you needed a lightbulb changed, you called and they did it” (Longman 2008:42).

Freeport took pains to make their workers comfortable, building the parish’s first hospital, recreational facilities such as a theater, library, baseball fields, two swimming pools, and a playground, and several Protestant churches. (It also donated money to the local Catholic church, St. Patrick’s, founded in Homeplace in the 19th century.) The town, with its paved roads, concrete drainage ditches, sidewalks, was described as the “most completely up-to-date community in the state” in the late 1930s, despite the fine yellow sulfur dust that often coated the town and eroded automobiles (Davis 2010; Lincoln 2008). Independently owned grocery stores, drugstores, and other small businesses formed near the town site. By the late 1930s, Port Sulphur had 600 residents and had outgrown its original footprint. New, pre-fabricated homes were barged in to supplement the earlier houses (Lincoln n.d.) The expanding town had 1,200 residents by 1950, comprising about 12% of the total parish population. In the 1950s and 1960s, Freeport began selling company homes to its employees, offering interest-free mortgage loans (Turlich 2002). Many homes were moved to new lots, and the town enveloped older communities such as Orange Grove, Potash, and Home Place (Lincoln 2008; Davis 2010).

The town began declining in the 1970s, particularly after Freeport closed the Grand Ecaille mine in 1978, and moved its engineers and other professionals to other locations (Longman 2008). As the price of sulfur dropped, and producing sulfur as a byproduct of oil refining became more cost effective, Freeport merged with McMoRan in 1981. Burt Turlich remembers the company changing then from a “family” to a corporation, as “everything was controlled out of New Orleans instead of on the property” (2002). The slowing of sulfur operations in the 1980s depressed Port Sulphur’s economy, and employees and their families began moving elsewhere as town facilities deteriorated. According to Burt Turlich, “Everything fell apart... We had a hospital down here, but then, you know, that kind of fell apart” (2002).

With Freeport’s ultimate departure in 2000, Port Sulphur “lost its economic ballast” and became a “dying town” (Longman 2008), although the 2000 population of the Port Sulphur Census Designated Place (CDP) then consisted of 3,115 people. Of those, 52.3% listed themselves as “black alone,” 28.3%, “white alone,” 15.5%, American Indian, and 3.9% Hispanic 3.9%. More than 20% lived below the poverty level. (These statistics represent the entire CDP, including small minority communities such as Grand Bayou and Diamond). Those who stayed were families with a long history and extended informal networks in the area. Theresita Ancar explained to author Jeré Longman, “It’s peace of mind. We marry each other in these little places,” stay close to their extended families, and feel safe without locking their doors (Longman 2008).

The Port Sulphur area is generally considered the beginning of lower Plaquemines, the region hardest hit by repeated hurricanes. Katrina destroyed most of Port Sulphur’s homes and businesses, and armed sheriff’s deputies guarded a roadblock in northern Port Sulphur for many months. When residents were allowed back in the parish, a FEMA trailer park was established in Diamond, and modular buildings were set up in Port Sulphur for the new, consolidated South Plaquemines High School. Slowly, a few restaurants and other retail businesses returned. Port Sulphur seems to have recovered from the hurricane more successfully than smaller villages downriver, such as Empire and Buras. Residents give Father Gerry Stapleton, the Irish pastor of

St. Patrick's Catholic Church, part of the credit for helping Port Sulphur return to some normalcy. He convinced the archdiocese to allow him to clean up and restore his church, which became a crucial community center in the aftermath; he also assisted low-income parishioners in locating financial and housing assistance. Still, like much of Plaquemines, Port Sulphur remains much smaller than before Katrina.

7.4.2. Specific Effects of the Spill on Port Sulphur

Port Sulphur has a more diverse economic base than either Pointe a la Hache or Empire, but it is still heavily dependent on fishing and felt the impact of the oil spill. Some local retail businesses lost employees to cleanup employment. For example, the first restaurant owner to re-open in Port Sulphur after Katrina had trouble finding people to work for her after the oil spill, because they all went to work on cleanup (CW505 2011). The boom also caused problems by tightening an already small rental housing market, particularly low-income housing. Affordable housing was already decimated by Katrina, and the post-oil spill rush by responders and media made things worse for low-income people trying to come home. The director of a charitable organization that locates rental housing for poor, elderly, and disabled people, said that after the spill, BP "sucked up" all of the available housing by paying owners far more than Section 8 housing vouchers could offer (CW502b 2011). The NGO, in turn, could not get grant funding it used to because they could not place as many clients in housing. Organization leaders reported that their plans to build a housing complex in Port Sulphur for poor and elderly residents, many of whom are African American, had met with some political resistance (CW502b 2011).

At the time of this study, several seafood processors worked in the Port Sulphur area and had oyster leases of their own. One family-owned oyster processing plant and wholesaler harvested most of the seafood the plant needed and bought from a few small, local minority fishermen. The oil spill shut them down for a whole year, and high river levels in the spring of 2011 further hurt their business. By August of 2011, they were still not getting as many orders as usual, because people are afraid to eat Gulf oysters. (They used to sell 2,000 to 2,500 sacks every three days, down to about 450 sacks every three says.) The son of the owners, said, "My dad got paid \$5,000. He's got a multi-million dollar business—I guess it must be millions with everything. It costs him more than \$5,000 a day to buy, shuck, and ship oysters" (CW520 2011). Like many other fishermen and processors, the oyster processors complained that there were many more out-of-state people (from Georgia, Texas, New York, and the Dominican Republic, among other places) hired for cleanup work than Plaquemines Parish fishermen. The son continued, "It's who you know, or who you pay" that determines whether you get hired. . Another employee of the processing plant commented that his boat blew an engine during the cleanup effort, costing him more money than he earned.

In summary, Plaquemines was deeply affected by the oil spill because of its proximity to the well, its economic dependence on commercial fishing and the oilfield, and the fact that that it is still recovering from Hurricane Katrina. Still, local residents seem determined to rebound. A parish priest commented:

This is an area that's always going to work hard to survive, to pool its resources to survive. It's a good place because of that, but it's hard living here. Everything has to be in order. The gas and oil industry has to be doing well and the fishing has to be doing well. People have strong faith here, which has enabled them to survive all these storms and the challenges of the oil spill. (BR044 2011).

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CHAPTER EIGHT: LAROSE, CUT OFF, AND LAFOURCHE PARISH, LOUISIANA

Diane Austin

Lafourche Parish is defined by its bayou, a 77-mile-long waterway that emerges from the Mississippi River and empties into the Gulf of Mexico (Figure 8.1). Until 1903, when it was dammed at Donaldsonville north of the parish, Bayou Lafourche was a tributary of the Mississippi River. After that time, low levels of freshwater down the bayou enabled saltwater to intrude in its lower reaches, and prohibited farming in the southernmost communities such as Leeville (Curole 2005). The bayou is flanked by state highways, LA 1 and Highway 308, and, until recently when LA 3235 was completed, these were the only overland routes into and out of southern reaches of the parish.

The parish is divided geographically and politically, with agriculture and service industries defining the north and maritime industries the south. Thibodaux, in the north, is the parish's largest city and the parish seat, reflecting sugar's historic prominence in the parish. Heading south, first farming and then fishing communities are situated along the banks of Bayou Lafourche. Water encroachment and periodic flooding limited farming in the lower reaches; fishing, hunting, and trapping were the primary activities there. Central Lafourche and parts of lower Lafourche are ringed by a hurricane protection levee system that, in addition to defending homes and businesses from flood waters, reclaimed large tracts of low land used for cattle ranching and, increasingly, for commercial and residential development. Onshore oil and gas extraction began in the 1930s and the parish remains a primary staging and support area for offshore oil and gas exploration and development. Port Fourchon, a shallow draft port at the mouth of Bayou Lafourche on the Gulf of Mexico, is the single largest oilfield support facility in the Gulf of Mexico. The port's rapid growth has been closely tied to the development of deepwater prospects. The general overview of Lafourche history below is followed by specific discussion of Larose-Cut Off and the effects of the disaster there.

8.1. LAFOURCHE PARISH HISTORY

The Lafourche delta, estimated to be about 1,700 to 700 years old, is the most recently abandoned Mississippi River distributary (Frazier 1967). Thus, while archaeologists have dated some Native American mounds, midden, and village sites in southern Louisiana to be at least 8,000 years old, the earliest archaeological sites dated within Lafourche and Terrebonne parishes are from the Tchula period (500 B.C. to 1 A.D.), during which time most of the land within the Lafourche region had been established (Weinstein and Gagliano 1985). When Europeans first arrived in the area, it was occupied by the Chitimacha, and by Washa and Chawasha Indians, who have been identified as Chitimacha-speaking people, but within a couple of decades warfare and disease had greatly reduced their numbers and most of the Chitimacha were living farther west on lower Bayou Teche and around Grand Lake (Galliano 1965). As the Europeans continued to move into and across the Gulf region, the remoteness of the coastal areas attracted people who were being driven out of other places as well as those who wished to profit off of the area's rich natural resources.

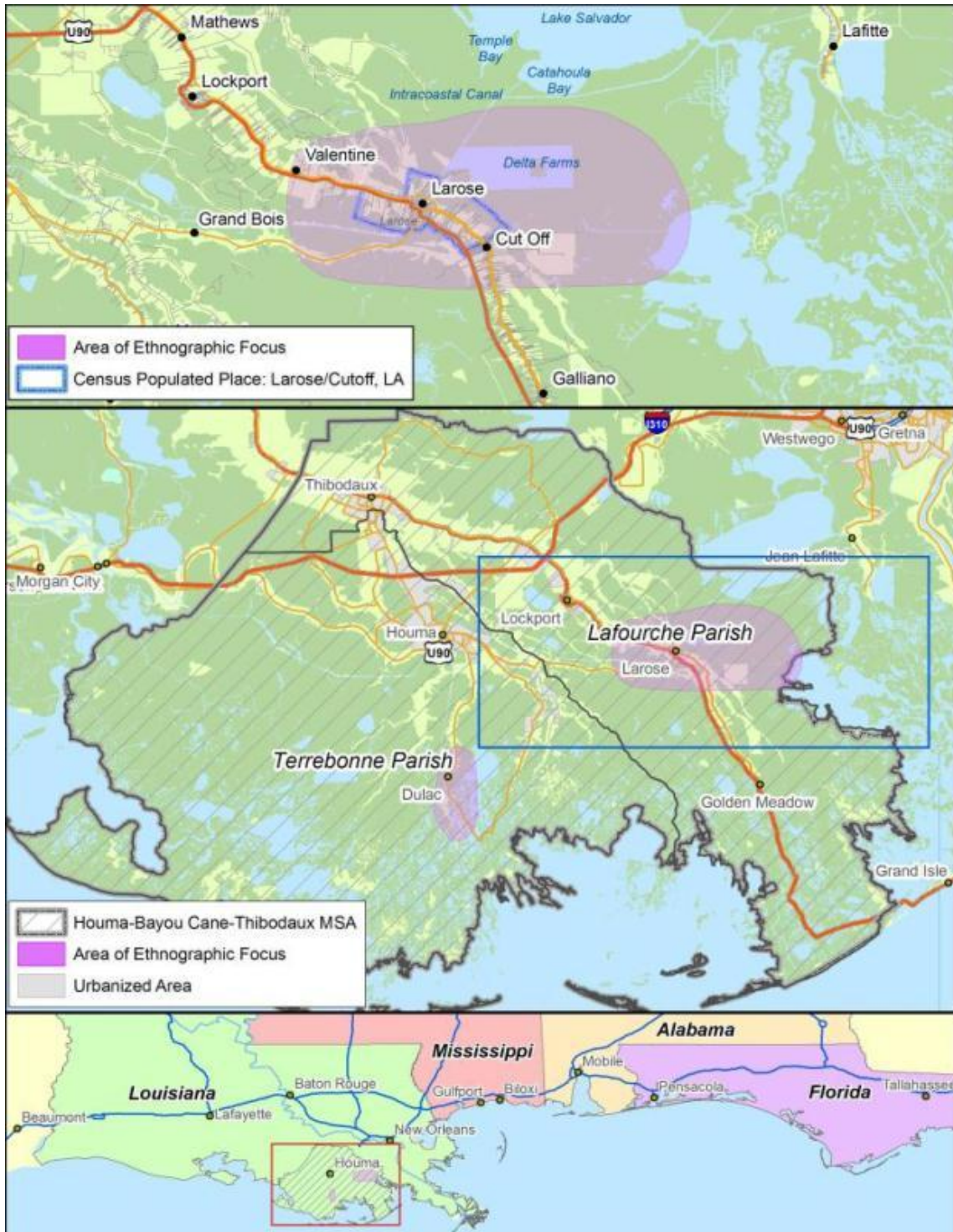


Figure 8.1. Map showing Lafourche Parish and Larose–Cut Off study community
 Source: Ben McMahan

Lafourche Parish experienced major changes in the early 1700s as French, Spanish, English, and German farmers settled there. Then, by the late 1700s, French Acadians (Cajuns), forced out of present-day Nova Scotia by the British, also moved into the area. Around the same time, new groups of Native Americans were pushed south into the region by the expansion of Europeans into their former territories. Anglo-American planters arrived in the 1800's, bringing large numbers of African slaves to work their plantations.

The Europeans established settlement patterns dictated, in large part, by the area's natural features, which vary from wetlands, lakes, and bayous in the coastal areas to flat agricultural lands in the north. Settlers were drawn to the high, arable land that formed the banks on either side of the bayous. The land was initially parceled by the French "arpent" or long-lot system (an arpent is 192 linear feet), whereby an owner would generally acquire a piece of land at least several arpents wide fronting the bayou and extending back 40 arpents to the marsh or backlands. Settlers were responsible for constructing and maintaining levees along the bayous well into the 1800s (Ditto 1980). The families lived and practiced small scale cultivation on the land; most gardened and obtained meat from small cattle herds, chickens, pigs, and other farm animals. They used small boats to transport produce to markets in New Orleans. Residents supplemented their food supplies and incomes by fishing, hunting, and trapping.

In 1822, Lafourche Parish was divided into Lafourche and Terrebonne parishes. Sugar brought planters to Lafourche in the 1800s, though small farmers outnumbered the sugar producers well into the 19th century. Until 1825, cotton, corn, rice and peas were the primary crops in Lafourche Parish (Ditto 1980). By the 1830s, some families had made their way as far south as Leeville, but marshland in the south precluded sugar cane farming and limited the size of settlements. "Larose was the last settlement on the bayou of any consequence in 1893. Golden Meadow had some six or seven farms and then immediately past these farms was an area of great oaks and wilderness" (Rogers 1985:98). Hurricanes, too, limited coastal settlement. Survivors of the 1893 hurricane that devastated Chenier Caminada moved north, many settling in Leeville and Golden Meadow but some going as far north as *Côte Blanche* (now in Cut Off). A 1909 hurricane inundated much of the Louisiana coast and killed about 350 people in Louisiana and Mississippi, leading residents of lower Terrebonne to move to the area below Golden Meadow (NOAA 1993, Westerman 2001). A 1915 hurricane pushed more people onto the ridges at Golden Meadow, offering greater protection from flooding while still allowing fishermen to access their fishing grounds (Rogers 1985).

Under the 1849 Swamp and Overflowed Lands Act, the U.S. federal government gave "overflowed" lands to the states. This did not include lands the government had already deeded to individuals as land grants. The State of Louisiana appropriated all swamp lands with no private ownership and created levee boards that took control over the land. Seeking to encourage settlers to the region, the levee boards used quit claims to transfer the land to private individuals.

For example, Edward Wisner acquired hundreds of thousands of acres of land in Lafourche and Terrebonne parishes from the levee boards in this manner. Part of his vision was to reclaim the land for farming, so he built levees and attempted to drain some areas (Derdak and Kepos 1993; Pitre 2001). In 1914, the Edward Wisner Donation was created from Wisner's estate to support local needs in the areas of beautification, education, recreation, and human services (City of New Orleans 1993). Wisner's levees were destroyed by the 1915 hurricane, his project faltered, and the foreclosures began. Henry Timken of Ohio organized a group of Midwesterners to take over the land, almost 600,000 coastal acres, hoping to lease it to fur

trappers. In 1926, speculator Edward Simms acquired Timken's shares in order to create a company that would explore for oil (International Directory of Company_Histories 1993). That company was incorporated in Maryland in 1927, as the Louisiana Land and Exploration Company (LL&E), signed a contract with the Texas Company in 1928, and subsequently became one of the largest independent oil and gas exploration companies in the United States (Wallace et al. 2001). In 1998, LL&E was sold to Burlington Resources, making the merged company again one of the nation's largest independent oil producers.

Oil was discovered in Lafourche Parish, at Leeville, in 1931. "Successful use in 1934 of a submersible drilling barge marked the start of expanded drilling activity. To realize the floating unit's potential, the industry needed to dredge canals to exploratory and development sites" (Davis 1985:159). Though settlers had been dredging canals in the region since they arrived, for drainage and reclamation, transportation, trapping, and logging, the extent of dredging that accompanied the oil and gas industry was unprecedented (Davis 1973). Combined with the loss of sediments from the Mississippi River, which were funneled off the Outer Continental Shelf following the construction of a massive levee system following the 1927 flood, and subsidence of the deltaic region, the canals were a major factor in the significant land loss that continues to this day. To improve the efficiency of transportation within the United States, in the 1920s Congress authorized construction of an Intracoastal Waterway running from the Atlantic seaboard to the tip of Texas. The waterway was completed from the Atlantic to New Orleans in 1936 and then, by 1942, from New Orleans to Corpus Christi, Texas. While it did improve waterborne transportation, it also divided communities and exacerbated land loss.

Fishing, shrimping, and oystering, too, were long-standing practices, especially in the southern part of the parish where they were carried out with small boats and the settlers consumed and sold the seafood they caught. Improved preservation techniques made it possible to expand the markets for this seafood. By the early 1900s, for example, Golden Meadow was home to oyster canning factories. Commercial shrimping was stimulated in 1917 when the U.S. Bureau of Fisheries introduced the shrimp trawl. Improved boats and gasoline engines allowed shrimpers to use the trawls, haul ice into the bays and lakes, and return with larger catches, significantly boosting the shrimp industry of lower Lafourche (Butler 1985). Lafourche shrimpers continued to adapt their equipment to their resources and needs. In 1980, Lafourche Parish had 450 steel hull vessels, the largest such fleet in Louisiana, but its shrimping fleet still included all manner of boats, from small Lafitte skiffs operated by one or two persons who returned home daily to the 90-foot steel hulled vessels that could accommodate four or five persons and stay out several weeks at a time (Ditto 1980). Oyster farming remained important and was second only to shrimp in monetary value in the parish at the time.

The common muskrat was trapped commercially from the early 1900s, and then, in 1938, nutria, a large rodent imported from Argentina, was accidentally introduced when animals were released from a pen on Avery Island during a hurricane. When the U.S. market for furs plunged in the mid-1980s due to nationwide protests against trapping and hunting animals for their furs, the value of the furs declined precipitously. Because of the damage nutria do to wetland vegetation, to encourage their removal, the state Wildlife and Fisheries department began to pay trappers for nutria tails.

Trapping and fishing practices were also affected by the consolidation of land ownership. At the time Wisner acquired thousands of acres of wetlands, they were considered and used as common property. Due to the challenges of delineating wetlands from arable land around them, disputes over whether land was already owned were common. As the presence of oil and gas

increased the value of the land, swamp land that had been available to all to use for trapping and fishing was taken by outsiders, through direct purchase and via unscrupulous intermediaries, who were intent on developing its petroleum resources (Wallace et al. 2001). Much land passed out of the hands of its Native American and Cajun owners, many who could not read or write. As time has passed, because Louisiana's civil law is based on the Napoleonic Code, with forced heirship a key feature, the land that did remain in the hands of local families has been divided up as it has been passed to successive generations. Some have retained access to the water and others have not. Because mineral rights can be severed from surface rights, among those who have retained their rights, some have both surface and mineral rights while others have retained only one or the other.

A significant portion of the arable land in Lafourche Parish is still devoted to farming (see Figure 8.2), but the discovery of oil and gas onshore and then in the Gulf of Mexico in the 1940s and 1950s led to a significant reshaping of the area's landscape and economy. As the oil industry burgeoned in the parish's southern marshes and lakes, local entrepreneurs seized opportunities to build businesses that supported this development. For example, Cajun mariners drew upon their knowledge of area waterways, and their expertise in boatbuilding, to develop specialized offshore service vessels, and several local companies grew to become massive global shipbuilding enterprises, bringing political leaders and foreign dignitaries into the bayou communities (Falgoux 2007; Campbell Field notes July 17, 2007). Farmers and shrimpers used the opportunity to work offshore to earn enough money to maintain and improve their farms and vessels (see also Gramling 1989). Much of the early growth was through family enterprises, with sons and nephews, uncles and cousins providing the workforce (c.f. Marks 2005). By the 1960's, manufacturing had become a major source of employment in the parish, tracking closely the rise and fall of the oil industry, with rapid increases in employment and wages in the 1970's and a dramatic fall in the 1980s (Campbell et al. 2013).

To support this new industry, in 1960, the state of Louisiana established the Greater Lafourche Port Commission. The following year, voters in Louisiana's Tenth Ward, which is south of the Intracoastal Waterway, approved a 5-mill property tax to fund development of Port Fourchon at the end of Bayou Lafourche. In 1963 LL&E and the Cailouets donated land to the Commission, but, other than a clamshell road being put in place, little happened until 1979 when Martin Fuel opened as the port's first major tenant (The Greater Lafourche Port Commission n.d.). In 1981, a consortium of five oil companies completed construction of the Louisiana Offshore Oil Port (LOOP), a superport located 18 miles offshore in the Gulf of Mexico, with Port Fourchon designated as its land base.

The 1980s downturn in the oil industry had far-reaching effects on the parish as thousands of experienced oilfield workers were either laid off or forced into early retirement. Although other factors such as smaller family size and greater options for young people are significant, many argue that the massive exodus of knowledge and expertise, and therefore of future mentors, remains a major factor in the lack of skilled workers within the oilfield in general and in vessel construction and repair in particular (Austin and Crosthwait 2013).

Following reorganization in the offshore industry, by the late 1990s Port Fourchon was undergoing rapid expansion. In 1999, for example, the port purchased 4,000 acres from Burlington Resources, and in 2000, the port acquired the South Lafourche Airport and 1,200 acres surrounding it. The port's earnings rose from \$1 million in lease sales in 1987 to over \$10 million in 2004. Its 2004 \$27 million budget had grown to over \$70 million in 2008 (The Greater Lafourche Port Commission n.d.), and it grew from 14 companies leasing 200 acres in 1994 to

250 companies leasing 1,700 acres in 2010 (AG409 2011). Though its major function is to serve the offshore petroleum industry, it has also provides water access for commercial and recreational fishers, is a foreign cargo shipping terminal, and is adjacent to a small beach.

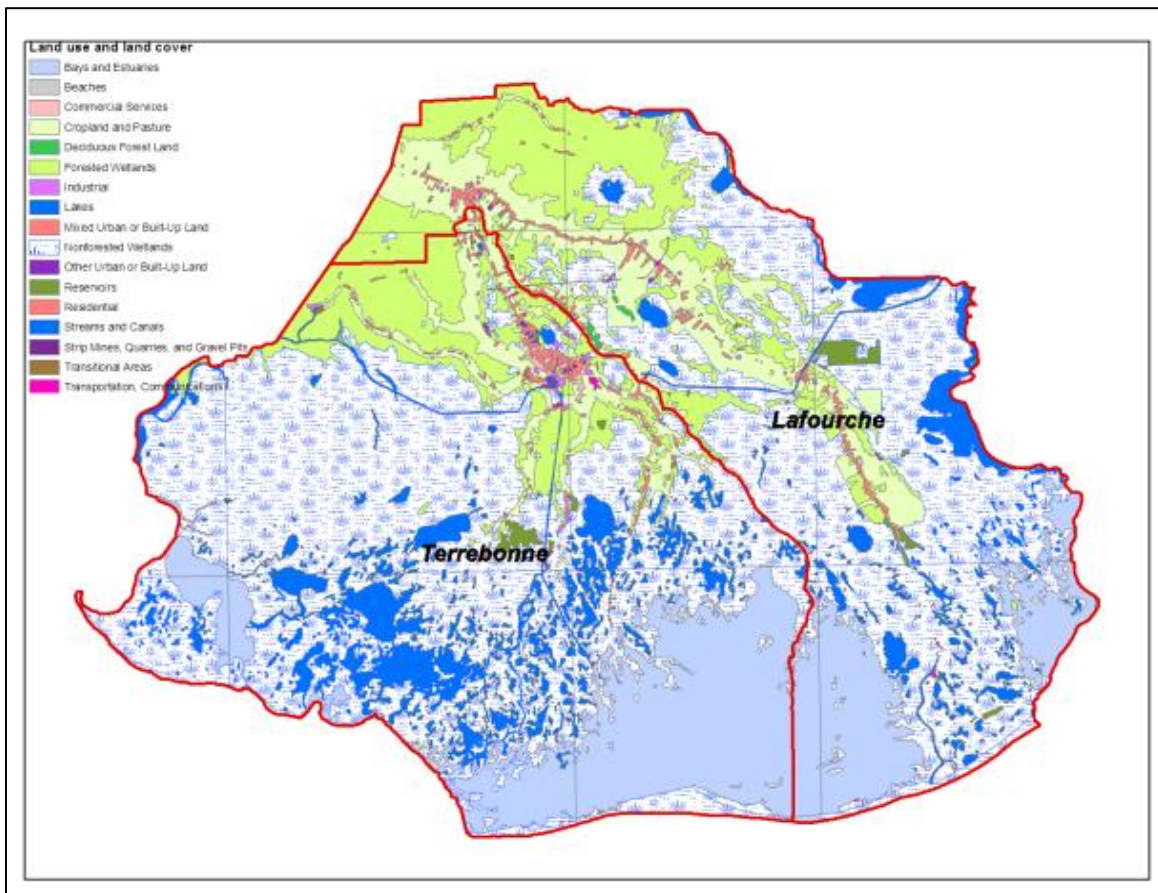


Figure 8.2. Land cover and land use, Lafourche and Terrebonne parishes
 Source: U.S. Geological Survey, 1990. Land use and land cover digital data, using data from Anderson et al. 1976. Map compiled by Huizhen Niu, LSU AgCenter.

As the offshore industry rebounded during the 1990s and 2000's, both employment and wages within Lafourche Parish's manufacturing sector improved steadily, with minor setbacks reflecting short term industry downturns (Campbell et al. 2013). Wages elsewhere in the offshore petroleum industry were also rising, drawing workers from local shipyards into higher paying and more lucrative offshore jobs. Vessel operators and labor contractors increased their recruiting and training efforts, trying to attract workers from across the United States and beyond. By the mid-1990s, some employers reported hiring large numbers of Hispanic workers, some of whom brought their families, and effects were felt not only on the yards and at the workplaces of those employers but also in the parish's schools and churches (Wallace et al. 2001).

Over the next decade, the composition of the onshore workforce underwent a dramatic shift, especially following Hurricane Katrina in 2005 when workers were pulled away to high-paying jobs in post-storm reconstruction at the same time that offshore repair work increased. Though local companies had been hiring immigrants and other non-local workers since the

1990s, both the numbers and origins of those workers increased significantly during this period. Area shipyards and labor contractors began hiring workers from countries as distant as Romania and the Philippines using nonimmigrant, H-2B visas. Some of the larger employers housed those workers on their yards and bused them to local big box stores to shop and send remittances home, creating very visible reminders of their presence in the communities (ship fab labor). New certifications and clearances required to work at ports and offshore, mandated by post-9-11 regulatory changes, went into effect as early as 2002, further exacerbating the split between those who could and could not work offshore.

By 2008, though, the global economic crisis, which slowed petroleum demand, had begun to be felt in Lafourche Parish. The huge influx of post-hurricane fabrication repair work was being completed and some of the pressure to find workers was relieved. Coupled with policy changes in Louisiana's Workforce Commission and workplace raids by the Department of Homeland Security, the slowdown prompted an abrupt drop in the number of foreign workers in area workplaces (Austin n.d.).

8.2. LAROSE-CUT OFF

Though distinct economically and socially, both Larose and Cut Off, two small communities of about 7,400 and 6,000 people, respectively, are combined as this study community (Figure 8.3). Located at the northern end of south Lafourche, in a transition zone between the plantations and sugar mills of the north and the fishing and oil centers of the south, Larose-Cut Off was also cattle country. From large property owners to sharecroppers, early residents kept cattle and other livestock for food. In 1910, in an attempt to create an agricultural community, a large polygon of marshland christened Delta Farms was surrounded by a four foot levee and drained. In addition to its cattle operations, through the 1950s Delta Farms employed residents from across southern Louisiana to cut sugarcane and pick cotton (Breux 2001; Billiot 2005). A little farther south, in Cut Off, Clovelly Farms was pumped and leveed, originally for cotton and then later for sugar and oil

In those same decades, many residents built and maintained their own fishing vessels along the banks of Bayou Lafourche and caught fish, shrimp, crabs, and oysters from the surrounding wetlands and bays for their own use and to sell. Some began to build for others and opened boat companies along the banks of the bayou. Residents also supplemented their incomes and their diets by raising crawfish, rabbits, and other animals and by hunting wild game in the wetlands and pastures surrounding their homes (Callais 2002). As the region's economy diversified, so, too, did that of its communities. By 1980, Ditto observed, "The bayou from the Intracoastal Canal south is home to net shops, engine shops, welding operations, dragline and dredging companies, barge lines, labor crew suppliers, workboat supply companies and the largest privately owned tugboat and towing company in the world" (1980:32). Despite the subsequent economic downturn, petroleum industry reorganization, and then massive storms, this pattern persisted at the time of this study.

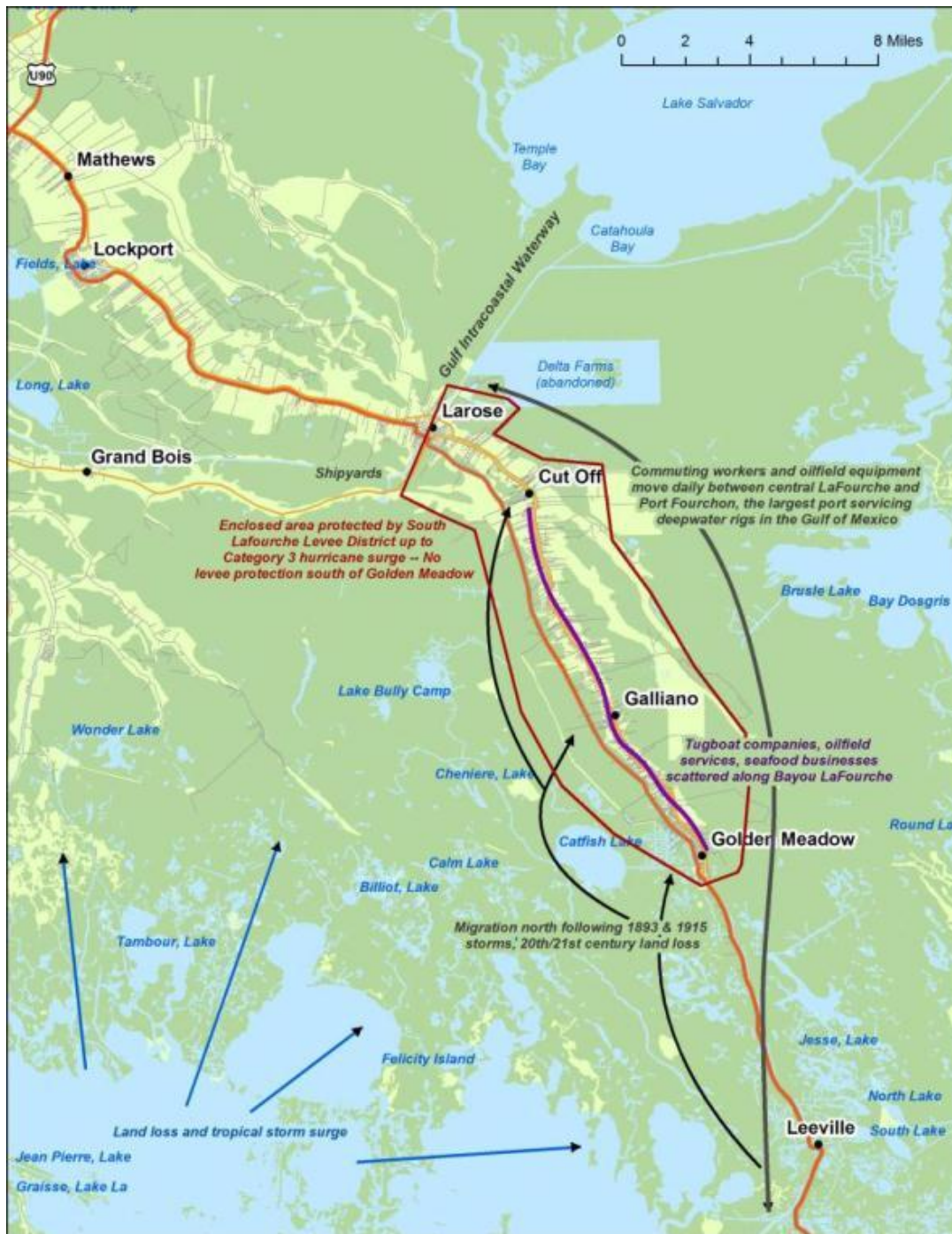


Figure 8.3. Map of Larose-Cut Off as defined by local residents, compiled from ethnographers' notes
 Source: Ben McMahan

8.2.1. Historical Narrative

Larose got its name from an early pharmacist, Mr. Felicien Larose, who, in the 1880s, successfully acquired a post office for the community (Daviet 2007a). Cut Off was originally named La Coupe, French for “the cup.” As noted above, Larose was the southernmost settlement in Lafourche Parish throughout the 19th century, and it initially drew much of its population from the north. It was connected to New Orleans by a canal dug by a resident in 1850 to transport oranges and potatoes to market. Though sugar cane farming was not as extensive as in the northern part of the parish, the Choctaw Plantation became a key feature in the area. Both Larose and Cut Off were populated primarily by Cajuns and French settlers, and the Catholic Church was key to the emergence and growth of both communities. Holy Rosary of Notre Dame was built in Larose on the east side of Bayou Lafourche in 1873 and became the center of the community; a private school was opened near the church in 1882, and by 1890 over 50 families had established homes and farms within two miles of the church (Daviet 2007b). In 1893, Sacred Heart began as a mission to serve the survivors of the devastating Cheniere Caminada hurricane who moved inland to *Côte Blanche* (Diocese of Houma-Thibodaux 2007), so named because the residents there used lime and water to paint the exterior of their houses, which lined the bayou, white.

Both communities grew during the ensuing decades. Mr. Elie Ducos built his estate in Cut Off in 1904, adjacent to the store he operated there (Ditto 1980). The year 1905 brought a yellow fever epidemic, the closure of the Choctaw sugar house, and the opening of Valentine Sugar. The waning timber industry led the Buckeye Stave Co. of Ohio to sell its land at Clovelly Farms in 1909; the new owners spent eight years reclaiming the land to create farmland, digging the first canal on the farm in 1915, and establishing a self-sufficient community of 50 families with a cotton gin, general store, and schoolhouse by 1935 (Adams 2007). The 1910 opening of Delta Farms, followed two years later by the sale of lots from part of the former Choctaw Plantation, also helped concentrate the population, attracting both people from the area and outsiders from as far away as Ohio (Defelice and Picou 2007). In 1914, Ludvine Sawmill, which had been a central feature in Larose, processing the timber that was being extracted from the region’s cypress and bottomland hardwood forests, closed because almost all the available timber had been cut by that time (Daviet 2007a). Delta Farms expanded on several occasions over the next decades, serving not only the families who lived and had plots of land there but also sprouting a hotel and summer vacation homes.

Land tenure in the community changed dramatically between 1920 and 1940. LL&E acquired wetlands for oil exploration in the area in the late 1920s, many sharecroppers lost their farmland during the Great Depression, and oil was discovered first at Leeville and then farther up Bayou Lafourche around Golden Meadow and at Delta Farms. Oil companies began installing pipelines throughout the region, acquiring rights of way through eminent domain and purchase, often for meager amounts (Austin 2006). Residents who were able to retain their property and negotiate successfully with the oil companies got rich and began to acquire their neighbors’ land as well. A 1938 blowout in Golden Meadow forced the evacuation of that community until the oil washed out of rooftop cisterns and residents could return; some of the evacuees stayed with family members in Larose and Cut Off while others went farther north as far as Thibodaux (Curole 2002).

Oil development also brought a new wave of outsiders. Mostly single men, many of the new arrivals came from far beyond the parish. Whether they were from north Louisiana, Texas, or elsewhere in the South, as they talked different than the local English accent and spoke no French, the locals called them all “Texiens.” Many stayed, married locals, and raised their children in the area, acculturating themselves into Lafourche Parish life.

The Intracoastal Waterway reached the area in the early 1940s, running through the center of Larose and splitting the community. Vessels began towing oil through the community, and bridges had to be moved to accommodate the tow boats. A small pontoon bridge was constructed across the canal on each side of the bayou, but residents recall that travel from one side to the other could take up to an hour because of all the boat traffic (DA613 2012).

During World War II, Larose residents served overseas and in the area’s shipyards, worked in the oilfields to supply fuel for the armed forces, grew corn and raised beef for the servicemen, and worked alongside German prisoners of war at Clovelly Farms (Penney 2008; Adams 2007). Immediately after World War II, housing developments were built to accommodate those coming home from the war as well as expanding Cajun and French families. For example, the Anthony Adams and Renis Cherie Subdivision was created in Larose in 1947 (EZNotice 2011).

During the 1950s, Larose and Cut Off became sites for inland oil drilling and, at the same time, offshore oil extraction created demand for people, vessels, and other equipment. Local shipyards expanded with new demands for tow boats and fishing vessels, and new yards and towing companies opened. Farmers mechanized and locals adopted the sugarcane cutter. All of this activity provided new opportunities for residents and attracted workers and, in some cases, their families to the area. Larose’s population jumped to over 1,200 people by 1950 (Daviet 2007a). Men moved between fishing and the oil industry, as opportunities arose. A local shrimper recalled:

Daddy, in his youth, he did what he could to make a living, trapping, [etc.]. He was a tug boat captain. Then on his days off he worked as a carpenter, till he became a full time trawler. He could make more money trawling, and he was his own boss... [When he was working on the tugs,] he worked out of Louisiana, Texas, and even Mexico. I know he went to Mexico... When he was a kid, he worked on trawl boats with [...]’s daddy. Then he got older, and -he had to support a family, and he went to trap. Then he worked on tugs. He worked 18 years with one company, then he went to work with another one. He bought him a little shrimp boat and worked on his days off. Then he took me one summer and we lived at the camp. After this he decided to go to fishing... He made enough money with his small boat to quit working on the tugs. Then he bought a bigger boat, then he bought two more. I started helping him...The families down here used to take their kids out of school to be there on opening day of the season... I started trawling and then I worked on barges as my winter job the last 6 or 7 years. My first real job was hauling, I worked in trucking. My daddy tied his boat up one winter and I went to work in the shipyard... It’s 35 years I’m married; I started my first job in the shipyard way before then. I was 17 or 18 back then... I even worked on a tug boat one year. [Back then you didn’t need a license to work on a tug.] Now you need a suitcase to carry all your papers [everyone laughs and concurs] and you have to get it renewed.... Working on the barges, I’m an engineer. I do maintenance. It’s like working at your house, you do the plumbing,

you're the electrician. I guess you can say I'm a jack-of-all-trades. Some of us are like that. (DA461c 2010)

Even when parents tried to get their children to do something else, many returned to fishing. The shrimper continued:

That was my dream for my wife to come. My wife used to love it. After my daddy quit, my mama came with me. Then my wife stayed home with the kids. They came when the kids got out of school... We let the kids finish [school]. My mama and daddy would come out till [the kids] got out, or her daddy would come. Her daddy would be the runner. We would come into the dock, he would bring groceries and take our dirty clothes, and we'd go back out. Some shrimp sheds had washers and dryers so you could wash your clothes, run get groceries, and go back out. The whole family would be on the boat. Like my son...He was raised in a playpen [on the boat]. That was with my daddy. I tried to dissuade him. He finished, graduated, got a job, but he didn't like it. Him and grandpa bought a skiff. He was supposed to work on his days off. Grandpa said we should have bought a bigger boat. That's what he does. (DA461c 2010)

And fishing has long been more than just a way to make a living. "Although crabs are caught commercially by more than seventy-five licensed fishermen, who fill moist wooden hampers with their bubbling catches, the occupation is one of the best sun-and-water therapies known to a Lafourchaise" (Ditto 1980: 39).

Yet, for all that stayed the same, by mid-century change was underway. In 1950, Larose and Cut Off were united, first in the opening of the Larose-Cut Off High School (Daviet 2007a) and then, in 1953, with the completion of a new pontoon bridge across Bayou Lafourche. In the early 1950s, residents received telephones, freshwater, natural gas pipelines, updated electricity, a volunteer fire department, and a VFW [Veterans of Foreign Wars] home. Highway 308 was paved and, in 1955, a freshwater distribution system was completed to replace the cisterns and tanks that to that point had provided residents with water. Hurricane Esther, in 1957, brought people from the lower bayou communities to Larose and the new high school gym served as the hurricane shelter. The influx of outsiders led to the 1958 establishment of the first Baptist church and education center in the area. By this time, Larose had two motels to serve travelers and tourists which also provided temporary housing for oilfield workers, some of whom eventually purchased property in the community (Wallace 2001; Daviet 2007a).

The Valentine paper mill was established in 1954 by sugarcane farmers looking to produce paper with bagasse, the principal byproduct of cane processing. By the mid-1950s, much oilfield work was offshore, so during the 1950s Tidelands dispute, when the oilfield practically shut down, many residents lost their jobs. Some left to work elsewhere in the oilfields and on boats servicing those other areas. Once the dispute was settled, activity picked back up, and many became wealthy. Though much of that wealth left the region, some reinvested it in the community. Charlie Wallace, an oilfield worker from Kinder, Louisiana, developed a mud scale and, in 1963, sold the patent for it. He used the money to buy land in Larose and subdivide it to create a housing development (Wallace 2001).

In 1960, construction of the high rise bridge on Highway 308 on the east side of Larose was finished; political wrangling over where the bridge would touch down ensued on the west side as local businessmen whose property would be bypassed protested. The Highway 1 lift

bridge was completed and local businesses suffered as larger stores were opened farther south. The oil and gas industry altered the economic landscape as well. Schlumberger opened its Larose office, and some of the small shipyards that lined Bayou Lafourche expanded or shifted their operations to build and repair offshore vessels.

Hurricane Hilda entered the Gulf of Mexico in September 1964, prompting the evacuation of over 2,000 personnel from offshore rigs and causing extensive damage to the offshore platforms there. On October 3, the day before she made landfall, Hilda spawned a tornado that struck down in Larose, killing 22 and injuring around 200 people (NOAA 1993). The tornado first hit northwest Larose and took out a big swath of homes and destroyed cars and buildings at the Schlumberger offices there, and then it jumped the bayou and wiped out Ludevine; the latter neighborhood was never rebuilt (DA613 2012). Residents and emergency vehicles were unable to move through the area due to downed telephone and electric poles, and an emergency makeshift hospital was set up at a Raceland agricultural center. Along with hurricanes Betsy (1965) and Camille (1969), the 1960s storms led to major changes in the design and construction of offshore rigs and platforms (Pratt 2008).

The 1965 Flood Control Act authorized construction of levees along Bayou Lafourche between Golden Meadow and Larose; the first funds were appropriated in 1972. In 1970, the Louisiana state legislature created the South Lafourche Tidal Water Control Levee District (renamed the South Lafourche Levee District in 1978). Hurricane protection levees were constructed to surround Cut Off and lower Larose in order to protect bayou communities from storm surge from the Gulf of Mexico Floodgates were constructed in the mid-1980s and a lock authorized in 2005 (CMI 2010; Figure 8.4). In 1971, for the second time in a decade, the levees surrounding Delta Farms failed, and the farmland was never again drained. “By that time oil production was bringing in more money than the farmland” (Defelice and Picou: 59). The area reverted to a lake and was leased for hunting, fishing, and alligator and nutria trapping.

Apart from the loss of Delta Farms, the 1970s were heady years for Larose and Cut Off. Both the seafood and petroleum industries were booming. High school students drove expensive cars to school and forewent higher education opportunities to take jobs in family businesses. As hurricanes and storms degraded the southernmost communities along Bayou Lafourche, families moved north to higher ground and inside the ring of hurricane protection levees surrounding the communities. More housing developments were built to accommodate these new residents who needed protection from flooding, and Larose-Cut Off became a bedroom community for those who worked in commercial fishing and the offshore oilfield, industries needing access to the region’s waterways and the Gulf of Mexico.

As offshore oil boomed, large shipbuilders eyed the area for its large tracts of land fronting the bayou and the Intracoastal Waterway. Years before construction of the large shipyards began, preparations were made for this new growth. Long-time residents recall seeing maps and street signs showing “Industrial Road” crossing cattle pastures, though few questioned why. By the 1970s, construction of these new yards had begun, with North American Shipbuilding opening its yard in 1974 (Colton n.d.) and Bollinger’s Larose yard opening in 1976. Larose had become home to a concentration of heavy industrial facilities serving the offshore oil industry and residential neighborhoods housing offshore workers and their onshore support staff.

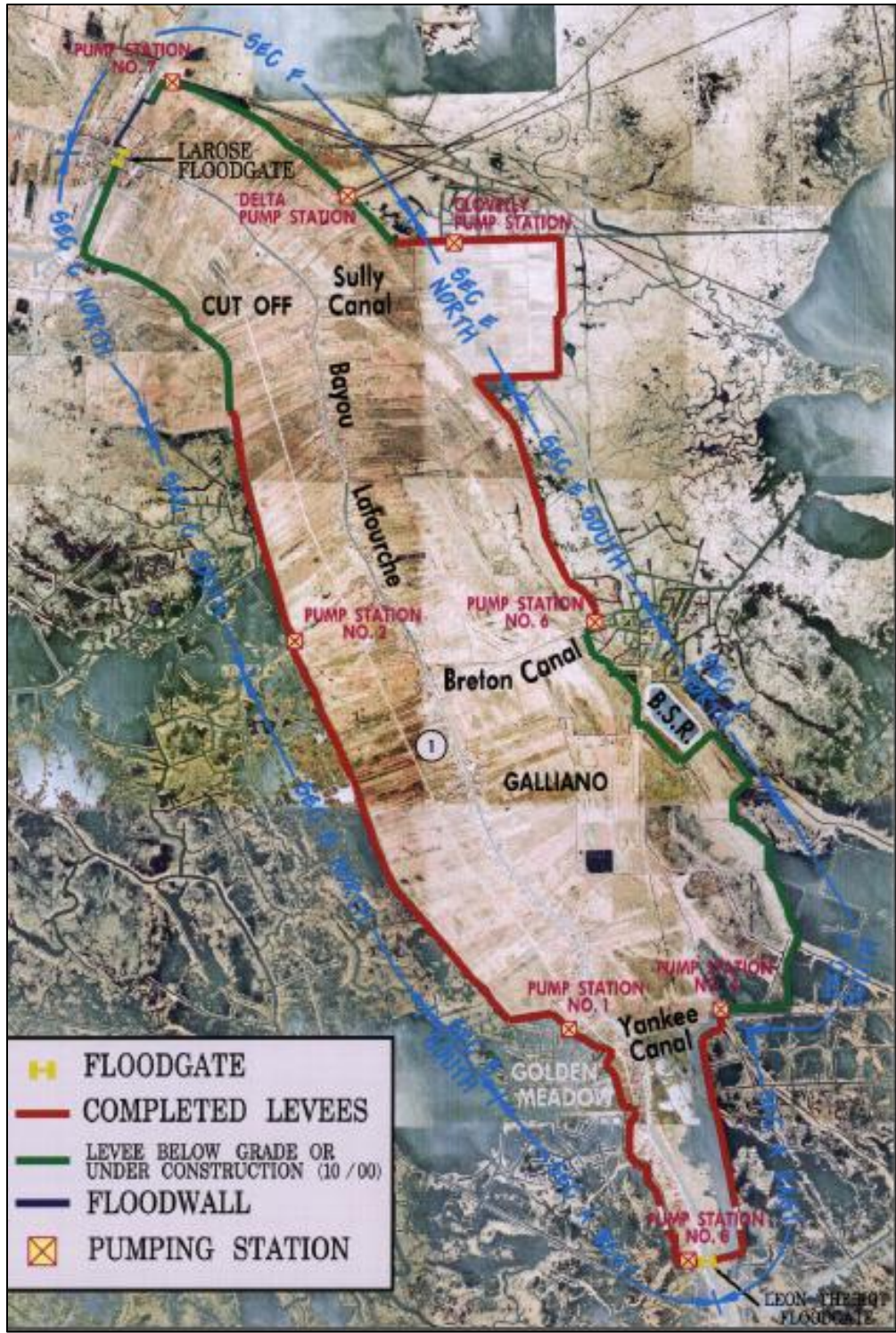


Figure 8.4. Map of levees, flood gate, and floodwall in south Lafourche, LA
 Source: South Lafourche Levee District n.d.

The growth during this period also supported investments in civic life. The Bayou Civic Club was incorporated in 1973 to "coordinate, support, encourage, and advance charitable cultural, educational, recreational, creative, and social activities contributing to the well being of the human race" (Larose Regional Park and Civic Center 2012). In 1979, the organization was successful in securing a \$1.8 million grant for the construction of a civic center. The Larose Regional Park and Civic Center, opened in May 1981, houses the senior center, local branch of the public library, and a tourist center, and hosts a wide range of programs serving residents from youth to adults. The park has numerous sports fields and recreation areas. It also offers hookups for overnight parking of campers and motor homes and serves as the region's primary evacuation center. Funds for the facility come from grants, donations, and special events such as the French Food Festival, which is held at the park every fall.

When LOOP opened in 1981, the Clovelly Salt Dome, located in Cut Off 1,200 feet below the surface and extending over a mile in width, was excavated to serve as a semi-permanent oil storage facility. The salt dome is connected to LOOP via a 28-mile pipeline to the south, and to refining facilities in St. James Parish via a 52-mile line to the north. The construction of the pipeline required more canal dredging, most of which occurred in Lafourche Parish. "The man-made network extends as tenacious features across the landscape, producing extractive patterns covering from under 10 to more than 40,000 acres. In the process land-water ratios are changed. Land is lost. Lakes become bays, and the amount of open water increases" (Davis 1985:160).

Just as the economy of Larose-Cut Off has become more diverse over time, so, too, has its population. Until the 1970s, most residents of Larose-Cut Off traced their origins to Cajun and French settlers, with a small number of Texiens who arrived with the early oil industry (Campbell Field notes July 17, 2007). During the 1970s, with much of the United States in recession, the burgeoning offshore petroleum industry was a magnet for migrants looking for work. Residents recall men with backpacks who appeared in town headed south toward the offshore companies in search of employment.

Then, beginning in the mid-1970s and over the next decade, more than 50 Vietnamese families moved into Larose and Cut Off, most tied to the commercial shrimping industry. Initially they lived in public housing as they saved money and pooled their resources to buy shrimp boats and equipment. Like their U.S.-born neighbors, those who had gained helicopter experience during the Vietnam War were able to secure jobs with offshore helicopter companies. Though tensions did arise between the newcomers and long-time residents, Larose did not experience the violence and outright hostility of other coastal communities. Though many Vietnamese Catholics attended Mass at Thanh Gia, or Holy Family, in Amelia, in St. Mary Parish, an extended chapel was established in Larose. Also during this decade, Hispanic workers from the United States, Mexico, and Latin America were drawn in to work. North American Shipyards built apartments nearby to house the workers. Though many who came stayed only a short time, mirroring earlier patterns, others married and settled in the community. Many long-time residents took advantage of the opportunities that were opening up offshore where they could earn higher salaries than they could in onshore positions.

Already by the end of the 1970s, Lafourche's economy was beginning to falter. The Valentine sugar mill, located between Larose and Lockport, was the southernmost of the six sugar mills in the parish during the middle 20th century and served sugarcane farmers to the south. The mill shut down in 1979 (Ditto 1980), putting people out of work and forcing farmers

to send their sugar farther north. Shortly thereafter, during the extended downturn of the 1980s, with its population so closely tied to the oil and gas industry, Larose-Cut Off experienced significant changes. Many oilfield-related companies went bankrupt during this period, and shipyards lost contracts and worked far below their capacity (Campbell et al. 2013). Cut Off had not experienced the rapid growth that Larose had, and its population continued to grow at about the same rate it had the previous decade, going from 5,049 in 1980 to 5,325 in 1990. In both communities, many residents who lost oilfield jobs turned back to traditional occupations like commercial shrimping, and more young people looked to higher education. Despite the challenges, during this period, a small number of entrepreneurs created new businesses, venturing into new and niche markets for fabricated goods and even cattle (Prakash 2013; Triple Son Farms n.d.).

8.2.2. The Downturn of the 1980s, Hurricane Katrina and the pre-Deepwater Horizon Disaster Social and Economic Landscape

The development and deployment of 3-D seismic exploration in the 1990s spurred renewed attention to, and the reworking of, the region's onshore fields. The Louisiana Delta Oil Company, for example, operates 16 wells at Larose and nearby Delta Farms. Between 2005 and 2011, the company drilled 18 wells, 15 of which were successfully completed (Louisiana Delta Oil Company n.d.). As one long-time resident noted, "Then by the late 80s workers started coming in from Alabama, Mississippi, Texas, and Florida. And now, like for the last 10 years or something, it's probably more outsiders than locals" (BR050 2011).

The 1990s expansion of Port Fourchon had direct and indirect effects on Larose-Cut Off as truck traffic increased tremendously, residents found work at the port, and local companies opened offices there (Keithly 2001). LA 3235, referred to by locals as "the back road," was completed from LA 24 to lower Golden Meadow, spurring commercial and industrial development along its length. Several new hotels were constructed in and near Cut Off to accommodate offshore oilfield workers. More farmland was converted to subdivisions, and Larose experienced a 26% increase in population between 1990 and 2000, growing from 5,772 to 7,306 residents. As in earlier periods, some of the increase was due to people from outside the area moving in, but it also reflects the migration of people from "down the bayou," with many shrimpers maintaining their boats in the lower reaches while moving their homes and families north. Cut Off maintained its rate of increase, growing 6% from 5,325 to 5,635.

Environmental concerns received greater attention in the 1990s and early part of the 21st century. In 1990, the Barataria-Terrebonne estuarine complex became part of the National Estuary Program that had been established by Congress in 1987 through Section 320 of the Clean Water Act. BTNEP is a partnership of government, business, scientists, conservation organizations, agricultural interests, and individuals and operates under a Comprehensive Conservation Management Plan to conduct research and outreach and lead initiatives to preserve, protect, and restore the Barataria-Terrebonne estuary (BTNEP n.d.). Among other concerns, BTNEP and other groups worked to share concerns about the effects of the ongoing land loss, noting not only the increased hurricane risk and habitat destruction but also that oil and gas pipelines were being exposed in the bayous. Residents of nearby Grand Bois drew attention to the oilfield waste pits between their community and Larose, and, after being exposed to toxic chemicals released during the disposal of oilfield waste from the cleanup of an oilfield site in

Alabama, filed a lawsuit against the waste facility, its owner, and the oil company discharging waste at the time of their exposure (Austin 2001; Roberts and Toffolon-Weiss 2001). They also gathered information and received help from religious leaders, scientists, and policymakers in their efforts to educate themselves about oilfield waste and the laws governing it, and to change those laws. Women and children from the community participated in a yearlong study of the health effects of exposure to the oilfield waste facility. Given the pervasive presence of petroleum and substances associated with its production and use, and the small population which precludes statistical analysis, researchers were not able to trace health effects to any single source. They nevertheless reported that the people of Grand Bois had been exposed to toxic substances such as benzene and hydrogen sulfide and to heavy metals and argued for more appropriate environmental monitoring, an evaluation of a nearby shipyard, and five years of medical monitoring (Williams 1998). No follow up monitoring was conducted, the residents and their advocates were unsuccessful in their efforts to change the laws governing oilfield waste or to get the facility closed, and their lawsuit was settled out of court. Due to disagreements over the material to be used in the berms that were to be built between the community and the waste facility, the berms were never built.

Though the residents of Larose-Cut Off did not experience the flooding or other damage caused by hurricanes Katrina and Rita, the storms flattened sugar cane in the area and were particularly damaging to the infrastructure that supported the commercial fishermen. According to a local fisherman, “Down on this bayou we lost two ice houses, two fuel docks, one shrimp shed, and one shrimp shed/ice house... and two more shrimp sheds. Grand Isle’s only got one shrimp shed left. They used to have two or three” (DA461c 2010; see also Chapter 2, Volume II). Hurricane Katrina also brought evacuees from New Orleans to the Larose Civic Center. The area shipyards, already busy due to an expanding offshore industry, responded to the post-Katrina boom and expanded their workforces. This time, in addition to Hispanic workers, they recruited and employed hundreds of foreign workers on H-2B visas and housed them in FEMA trailers, converted buildings, and in barracks constructed on company property (SC037 2008). By the end of the decade, though, the H-2B workers were gone (Austin and Crosthwait 2013; Austin n.d.).

Hurricanes Gustav and Ike brought problems as well. For example, in 2008, Hurricane Gustav left thousands of residents with foul-smelling drinking water for weeks, resulting in an emergency declaration to begin a long-awaited project to reconnect Bayou Lafourche to the Mississippi River at Donaldsonville. After failing to obtain other federal funds for the project, in July 2011, Governor Jindal announced that the state would dedicate monies from the Coastal Impact Assistance Program (CIAP). The CIAP was created by Congress in 2005 and managed (since 2011) by the Fish and Wildlife Service and sends a portion of money made from drilling in the Outer Continental Shelf back to Gulf Coast states for coastal projects. Between 2007 and 2010, Louisiana was awarded \$495 million in CIAP dollars. (Buskey 2011).

The population continued to grow throughout the decade, with Cut Off continuing to grow at about 6%, to 5,976 in 2010, and Larose growing 1% from 7,306 to 7,400 reflecting again an influx of newcomers from the north as well as those moving up the bayou from the south; both communities over 40% of the residents claimed French or French Canadian ancestry in the 2010 Census. A number of large homes were built along the highways flanking Bayou Lafourche. At the same time, though, during this study residents reported that young people have left the community in search of better educational and work opportunities as commercial fishermen, shipbuilders, and oilfield workers discouraged their children from following in their

parents' footsteps (see also Austin and McGuire 2002; McGuire, Austin, and Woodson 2013). Responding to the increased security concerns prompted by the September 11 attacks on the World Trade Center, the U.S. government instituted several new security measures. Those affecting ports, particularly the institution of the Transportation Worker Identification Credential (TWIC) in 2002, prevented some workers from obtaining employment as merchant mariners and at Port Fourchon and offshore facilities.

By 2007, though, the post-Katrina boon was already beginning to wane. The Valentine Paper Mill closed its doors in late 2007 due to decreasing sales and other economic factors (Lundin 2007). The slowdown began to affect area shipbuilders by 2008, as they completed their post-storm contracts and found little petroleum-related work (see Chapters 1 and 4, Volume II). A 2009 crackdown on immigrant workers led to the outmigration of many Hispanics, made it more difficult for those remaining to find work, and reduced the clientele of local Mexican restaurants and grocery stores.

Struggling with high fuel costs and low shrimp prices, some Vietnamese fishermen were getting out of the business, and some were moving away. One fisherman noted that, of the six children in his family, three boys and three girls, the youngest born in 1979 and the oldest in 1968, one had gone to Tulane University on a scholarship and another owned a nail shop in Houma. Though his father-in-law still had a house in Larose, and his son-in-law's boat's homeport was still there, he had moved to Houma to live. When asked if any of his children would follow his footsteps, he responded, loudly and instantly, "NO. My kids don't want to get into commercial fisheries, what future is there in it [*the nao tuong lai?*]. Nevertheless, some remained. A Vietnamese resident of Amelia, noted that the people there were working in the oilfield or in seafood, like his mom, who picks crabs, sometimes working in Morgan City and other times over in Des Allemands. The company picks up the workers in a van to transport them to the plant. His uncles, though, live in Larose and own big freezer boats that go out for a month at a time.

In early 2010, though the shipyards were still dominant on the landscape and as employers (South Louisiana Economic Council n.d.), they were operating in the midst of cattle operations, oil and gas fields, commercial strip malls, and properties managed for hunting. More residents were employed in transportation and mining than any other industries, reflecting the large number of people working on the offshore service vessels and on the drilling rigs and platforms across the Gulf of Mexico and beyond.

8.3. SPECIFIC EFFECTS OF THE SPILL

Located 30 miles inland from Port Fourchon and the Gulf of Mexico, Larose-Cut Off was not physically affected by the Deepwater Horizon explosion and resulting release of oil. In many respects, this community represents a transition zone in terms of impacts of the spill. Similar to the people in communities even farther from the Gulf, due to their economic situation, some people were buffered from the spill's immediate effects. At the same time, because many individuals and small businesses work for others who are closer to the Gulf – in both oil and fishing – they experienced some of the conditions of those communities as well.

Throughout 2010 and 2011, some residents reported successful hunting and fishing trips on and near the inland lakes and bayous near their homes and continued to bring home crabs,

crawfish, and other food for their families and neighbors. However, the absence of oil in the nearby waterways did not mean that the people of this area escaped the effects of the disaster.

The spill caused concern to local officials who had argued that industrial development and environmental protection were both possible: “BP, with their one incident, ruined it” (AG409 2011). A hotel manager from south Lafourche noted that, “despite it all, she still wants the oil company to go back into business. Half of her family works in oil, and they need it to live” (Galeucia Field notes, 2011). A short time later, farther up the bayou, in Golden Meadow, a salesman reported “that business has been fine. He thinks that people are overreacting. The season was only closed for two months, and he went through the claims system and everything was fine” (Galeucia Field notes April 2, 2011).

However, response to the spill did not depend solely on geographic distance. Employment, family ties, and social networks connected bayou residents to what was happening in the Gulf. Initially, many expressed fear, anger, and concern about BP, raising questions about who was responsible for the disaster. Some blamed BP, some accused the MMS, and others pointed the finger at contractors such as Halliburton. During the summer of 2011, concerns the dispersants being used were as common, or moreso, than concerns about the oil. Discussion of whether to catch, sell, and eat the seafood popped up in most conversations. While few residents spoke outright of conspiracies, many expressed their distrust of BP, the federal government, and even their local officials. According to a shrimper whose boat worked the spill:

[The guy from BP] said, “The dispersants that were used were just like Dawn detergent, no more harmful than Dawn detergent.” ... I told him I was insulted: “What, we have stupid written all over our foreheads?” He said, “We have scientists working for us. You want to talk to her?” First I said, “Yes,” then “No. You have scientists working for you, you will tell her what to say.” Everything he’d say, I’d come up with more of my distrust theories. I was furious. To think that they could come in there, they just came to pacify us. I said, “Nobody there knows any answers. Nobody can tell us the truth. I think you all bought off our parish council. I don’t know how you did it.” My boat was working, and I didn’t care if I got fired. And I said, “That joke of decontaminating boats. That’s a joke.” You saw boats up and down our bayou full of oil, and that’s where our drinking water comes from. There’s so many, so many, so many-, We should not have seen the boats that were working the oil in our bayou. Not up by Larose (DA431a 2010).

A merchant noted that the worst was the dispersant spray in the middle of the night. “BP was here to skim the oil, but it was really a smokescreen. After they skimmed they sprayed the dispersants and sank it all to the bottom of the ocean, out of sight, out of mind” (AG422 2011).

The majority of community leaders, business owners, and oilfield workers, though, quickly shifted their attention, and their criticism, to what was referred to by some as “Obama’s moratorium.” The spill happened as offshore activity was picking up for the 2010 season. Offshore supply vessels servicing production platforms and inland rigs continued working, but the drop in drilling was noticed—where production platforms have long term contracts and fairly predictable workforce needs, drilling is more volatile and involves people and companies to provide a wide range of services. Some of those services, such as vessels, catering, and groceries, were needed in the cleanup, so the effects were delayed. Nonetheless, unsure of the duration of the spill or cleanup work, many boat owners were reluctant to commit too many of their vessels to the cleanup. Though few companies laid off workers, many reported that they were cutting back on hours. Contractors, such as welders and carpenters, who typically work for the larger companies were hard hit as the companies no longer called them.

Likewise, motels in and near the community that house production workers saw little, if any, change in their business while those housing rig workers noticed a significant drop in their regular customer base. Any motels in the vicinity were fully booked as long as BP and its contractors were actively working the cleanup, through spring 2011. Retailers, too, reported mixed outcomes (see Chapter 5, Volume II). When asked how business had been since the spill, a local auto dealer responded, that it was “not fair to say,” because of all the changes that were taking place. He reported that although there were initially tax incentives for vehicles, those ended and his dealership was not doing the business they had done in the past. He noted that when the spill occurred, business went down. Then, when the cleanup workers came, business went up. By spring 2011, though, his business was down again (Galeucia Field notes, 2011)

Port Fourchon served as a primary staging area, with direct and indirect effects on the people living along Bayou Lafourche. Also, though offshore production continued through the suspension in drilling, many companies operating out of the port were affected; the port commission reduced the rent of tenants by as much as 30% by July 2010, renewing them at the low rate again in January 2011. According to a port official, “A couple of tenants asked for additional assistance beyond the 30%, which the board approved. These are the tenants who are caught in the quagmire, because they were relatively new renters and hadn’t gotten their time in to get things off the ground yet. So the spill hit before they were even making money. Since they were new and still building, they lost a couple of potential clients, and now the market for new customers is gone” (AG409 2011).

Fourchon Beach, a nine-mile tract of coastline, and the fishing areas three miles out from Elmer’s Island to the beach, were closed a month after the spill because oil began appearing there. The beach had been the focus of considerable controversy for several years prior to the spill, since the Caillouet Land Company and the Edward Wisner Donation, the owners of the land behind the beach, blocked access to it (Besson 2011; Monroe 2012). State law designates as public domain the shoreline up to the mean high-water mark during the winter months, but coastal erosion and the zigzagged shoreline have left much of the sand area that falls in that zone underwater during the summer. Restoration projects proposed for the area are under scrutiny; the Wisner Donation filed suit against BP for contamination and response costs and representatives do not want to see restoration activities commence until the property is returned to the condition it was in before the spill. Concerns include ongoing contamination, erosion from sediment removal that occurred during beach cleanups, and metal stakes that were used to hold snare and boom and have been left in the sand. The South Lafourche Beachfront Development District has

attempted to negotiate with both landowners to restore public access to the beach because of interest in making the beach a central feature of new tourism development (Besson 2011).

Though the Larose-Cut Off is not a regular tourist attraction, its restaurants and stores benefit from tourists passing through to Grand Isle and Fourchon, and the oil kept fishermen and beachgoers away through the summer of 2010. Summertime fishing rodeos were cancelled. Larose's main fall event, the French Food Festival, was held in October with the theme "Life is Still Good" prominently displayed on yard signs, bumper stickers, and banners. A variety of businesses sponsored the festival, including energy and oilfield service companies. At the festival, the chairman explained, "We didn't know if we'd have seafood or what the effects of the moratorium would be." (Austin Field notes, October 20, 2010). The parish did get what one individual called "spill tourists," as well as stars such as singer-songwriter Jason Mraz who came to promote awareness of the spill and stopped at a local restaurant for lunch. Still, the local chamber of commerce reported that overall sponsorship and attendance at events was lower in 2010 and into 2011 than it had been before the spill.

The Larose Civic Center was used for community and areawide meetings, attracting presentations by Kenneth Feinberg, the Louisiana Shrimper's Alliance, and the National Oceanic and Atmospheric Administration (NOAA), the latter in June 2011 to discuss proposed changes in the rules surrounding the use of turtle excluder devices (TEDs) when they suspected improper use of TEDs was the cause of turtle deaths.

As BP released boats that had worked the spill, some were able to return to fishing, but others were not. According to a shrimper who worked for BP,

We had to be decontaminated. We had heard they were going to be decommissioning. They had a boat in the Houma Navigation Canal. If they seen a boat coming in with oil, it had to be decontaminated. The only time for me, at the bitter end, the oil never stuck to my boat, but they decommissioned us. We had to stay another four or five days at the dock after they took the supplies off. Then we were on stand by for three days. We got the call that we were dismissed. "Ya'll can go to your own port." They quit paying us. (DA461c 2010).

As the months wore on, anger, frustration, and despair grew. Where some individuals, families, and businesses were not affected as much as leaders and media outlets had expected, others were falling through the cracks with almost no one paying attention. At the end of 2010, researchers heard almost uniform reports that things would get worse in 2011 as the VOO payments, BP emergency payments (and, for many, final settlements), and other temporary sources of revenue dried up.

Winters are often slow in these communities - shrimpers pull up their nets and come home and offshore activity slows down as bad weather makes it difficult to work in the Gulf - and 2011 got off to a slow start. Reports of companies pulling their rigs from the Gulf continued (see Chapter 1, Volume II). Oilfield-related fabrication work was also down; those who worked on fishing vessels reported that business was slow because many of the shrimp boats had not worked the prior season and therefore were not coming in for repairs. Some of the yards that worked for larger vessel companies that had sufficient capital were doing some repair and maintenance work on the vessels without contracts. Though many service companies already had overseas contracts, and many oilfield workers had been working overseas for decades, the

slowdown did push some into new territories. Larose-Cut Off is home to many boat captains and others who went overseas, and their absence was notable at local banks, hair stylists, and such.

By February 2011, some of the oilfield service companies had begun reporting that they were laying off workers, and employees reported that they were working in jobs below their skill levels, taking what they could to keep working. Those who were not working had cut back on their spending, though the trickle-down effects were not uniform. How businesses were faring also depended on the conditions they were experiencing at the time of the explosion. Those who had come out of the 2005 and 2008 hurricanes with a lot of debt, had already taken out loans, or had faced other calamities such as fires struggled to deal with yet another crisis. One owner noted that his store had really been hit hard. Prior to the spill, of the 33 rigs that were operational in the Gulf his store had served 17, but at the point he talked with a researcher in 2011 he was serving only 3 of them. He had cut employee hours, trying not to let anyone go; all of his 11 employees had been working at the store for at least 8 years. The one advantage, he noted, was that because his shop was closing early each Friday, his employees were able to spend extra time with their families. Like many, at that point he was anticipating that permits would be issued and by June or July things would pick up (AG407 2011).

Into the spring months, the economy remained slow. Employers, merchants, and social service providers noted that the number of Hispanics in the community remained far below what it had been five years earlier. Community organizations conducted outreach about the spill through their regular activities; for example outreach workers took part in the UHN Sweethearts Dance held in Larose in February. Soon afterward, BP representatives started making the rounds to chambers of commerce and community centers throughout the region, allocating small grants to specific projects or programs. As this practice continued throughout the year, some became adept at asking for money.

Even in February, a number of retailers reported not being sure if they should file a claim. A florist, for example explained that she experienced delays between when her product goes out and the payment comes in, which made it hard to show the loss of business on paper before the deadlines for filing claims had passed. Much of her usual product was perishable, but with the uncertainty she had shifted to non-perishable items (Galeucia Field notes, 2011).

In April 2011, Port Fourchon was declared by one merchant to be “dead as a doornail” (DA491 2011). Merchants all along Bayou Lafourche complained that business had been particularly slow since the spill because BP did not buy locally, and the oilfield was not picking up. The fishermen had not returned either. The areas were not closed, but as the merchant observed, “They’re just scared. It’s a Saturday, and there’s no one here” (DA491 2011).

Having been repeatedly challenged by outsiders who questioned how they could support and participate in the offshore petroleum industry, some local officials had become defensive. A port official, acknowledged that the industry had some negative effects, but he pointed out that people from the local communities need and want jobs in the area so they do not have to leave and move elsewhere for work. He noted that they “live here, work and play here. We don’t want to leave, because this is home” (AG409 2011).

By spring, the disparities in who had and had not made money off the spill were more obvious and a regular topic of conversation. A former offshore worker and part-time fisherman talked about how he was riding with his cousin in his truck the day before when his cousin told him he paid \$60,000 in taxes, meaning he had made about \$350,000 from the spill. His cousin had a medium sized boat and worked through the whole cleanup. He had built himself a new house and had three new trucks in his yard. The worker also talked, though, about another

relative who had lost his job because his company had been bought out, even though his company was making lots of money. He speculated that the moratorium might have just been an excuse for the owners to sell out, commenting that “the companies have done this before, they did it in the 80s” (DA489a 2011).

One point of contention was how deckhands were counted and compensated, with some arguing that their neighbors had made extra money by claiming their children, nephews, and others, many of whom had never been on a boat. However, the question of who is and is not a deckhand proved challenging to answer. In late 2010, in response to the question, “How many deckhands do you have?” one shrimper responded, “Sometimes one, sometimes three, sometimes me, myself, and I. Sometimes I’m ready to go out and I can’t find a deckhand. I get mad and get ready to go. My wife says, “You can’t go by yourself.” I say, “Go pack your clothes” (DA461a 2010).

A year after the spill, both fishermen and people whose work is directly involved in the offshore oil and gas industry, expressed concern about how they had been ignored. A shipbuilder reported,

It’s dead, dead. We’re half a million off in earnings. I have two yards. I was looking at what to expand. Usually, I work on shrimp boats, medium and smaller ones. Now it’s just little stuff, personal stuff. There’s not a market like that anymore. I’m down to two employees. I had eight or nine. I won’t go broke keeping open. I’m sixty-three years old and will join in with the big guys if that happens. .. We didn’t get nothing. Nobody helps us. We put a claim in with BP. They want all this paperwork. I don’t want anybody to give me nothing. I’d rather had the work. You’re going to give to some people that have no loss. It’s sad, I don’t know what it’s going to become. ..They (the government) don’t want to give leases and permits. You hear it all the way down the line. It’s a no way out situation. ..But the questions remain. “Will it come back? Will it regenerate? Will it all go overseas? What we gonna do?”... Open up drilling again, take the permits off. Let the investors do their thing. There are a few good things they talked about doing like P and A (plug and abandonment) for the abandoned well. The thing would be, they say we’ll give one trillion dollars for P and A, and it’s good over 10 years. These big lump sums don’t do anybody any good. I get repair on boats, may build a few more (DA497 2011).

The large shipyards were getting contracts outside the oil and gas industry. In April, for example, Bollinger launched the first of a series of eight Fast Response Cutters being built for the U.S. Coast Guard, and its Lockport yard was awarded a contract to build four more of the vessels. (Bollinger Shipyards, Inc. 2011).

Oilfield activity did pick up a bit in the summer of 2011, but it was short-lived. Most companies reported little change in their circumstances. At the end of the year, uncertainty still hung over this community. Despite the problems, though, many expressed relief that things had not been worse, relief that they had had no major storms in 2010 and had received no major effects from the 2011 storms. Community leaders and business owners expressed almost unanimous support for resuming offshore drilling at higher levels. As one retailer noted, “[We] sold our soul to oil a long time ago,” and without the industry he anticipated there would be a lot of problems. (Galeucia Field Notes February 24, 2011). In March 2012, FEMA announced that, through its Hazard Mitigation Grant Program which aims to help communities implement long-term projects for protecting life and property, would provide more than **\$1 million** in funding to

the state of Louisiana to improve the Golden Meadow floodwall in Lafourche Parish (FEMA 2012).

The long-term effects of the disaster, both economic and social, will not be known for years. Some reported that the spill made them “think about a whole different way of living” (AG422 2011). This merchant, for example, noted that there had always been tar balls on the beach when he was growing up, but he and his community had never experienced effects to this scale. He suggested that the government should replace a lost industry with a new industry –like wind turbines – noting that the old platforms could be wind turbines and that the oil workers could be re-educated to work with “air energy.” For some, the spill brought up questions about moving, though at least as common as concern about health or environmental effects was the question of what they would do if the oil industry did not come back.

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CHAPTER NINE: DULAC AND TERREBONNE PARISH, LOUISIANA

Justina Whalen and Diane Austin

For as long as they can remember, residents of Dulac have lived in the midst of challenges and have had to defend their community and way of life from natural events, such as hurricanes and floods, and outsiders who had specific ideas about how they should live and work (Figure 9.1). These contests extend back for several centuries, and this section provides the historical context within which they developed and the contemporary circumstances that influenced how the *Deepwater Horizon* disaster was experienced.

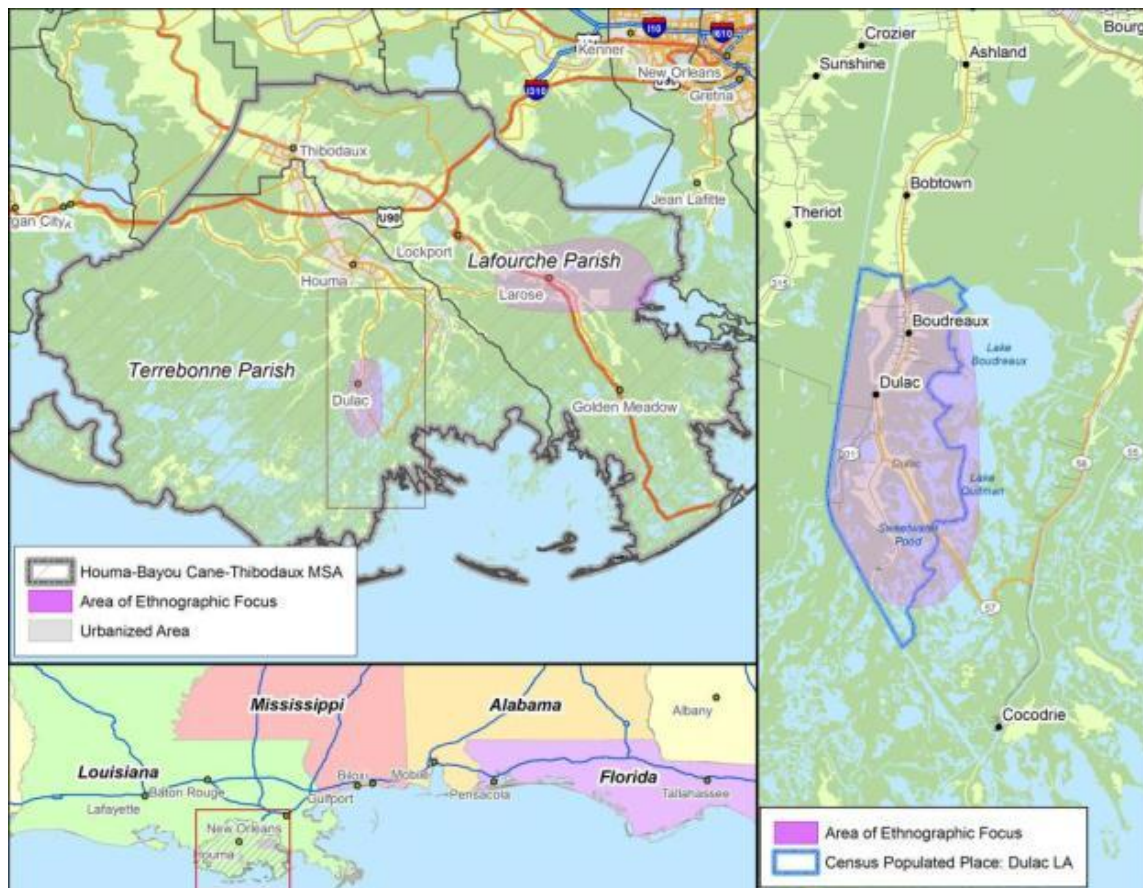


Figure 9.1. Map showing Terrebonne Parish and Dulac study community
Source: Ben McMahan

9.1. TERREBONNE PARISH HISTORY

Though evidence of Native American settlement in Terrebonne Parish dates back at least several thousand years, the people who occupy the region today trace their history to more recent periods. At the time of European contact, the region was home to Chitimacha-speaking peoples, and though the majority of those people were killed or had moved to the northwest of the region by the 1800s, some of their descendants remained (see Section 4.4). The city of Houma was named after the Houma Indians who had moved into the area in the late 1700s, settled on the high ground northwest of present-day downtown Houma, and later migrated farther south into the bayous where they hunted, fished, and trapped. Other settlers, too, made their way into this region, many by following the waterways of the Mississippi River and moving down the bayous. Spanish and Anglo settlers entered the area, but the most significant migrations involved French settlers who arrived after the transfer of Louisiana territory to Spanish control in 1762, and, around the same time, the Acadians (Cajuns) of Nova Scotia. The region was attractive to these groups because of isolation, minimum government control, fertile land, and an abundance of fish and wildlife. Members of the Native American and French populations interacted with one another, and assimilated others into their communities, but they remained distinct.

Louisiana returned to French control in 1802 and became a U.S. territory with the Louisiana Purchase of 1803. Terrebonne Parish was established in 1822, the second largest in the state, but one with very little high ground,⁵ dominated by wetlands, low prairies, bayous, and lakes. By the mid-1800s, the region's economy was dependent on agriculture, seafood, the fur trade, and logging (see Austin 2006). Sugarcane cultivation was Terrebonne Parish's principal agricultural activity, and expansion of the sugar industry, in response to federal tariff protection and a growing national demand for sugar, led to large-scale environmental and social changes as planters intensified cultivation, enlarged production facilities, and modernized grinding equipment to maximize yields (Follett 2000, 2005). Along with the timber industry, sugar brought Anglo American outsiders to the region, seeking wealth and significantly altering the demographics of southern Louisiana. Although a few Cajuns became successful planters, most were small landholders who were largely displaced from the most valuable and productive land by mid-century (Dormon 1983). The first plantation in Terrebonne Parish was established in 1828, and by 1851 the parish had 110 plantations and 80 sugar houses. The sugar producers depended on large numbers of black slaves, which the planters imported, and as in neighboring parishes, the population of the parish became majority black (Highsmith 1955). By 1853, Louisiana planters produced one-fourth of the world's sugar and were among the South's wealthiest slaveholders (Rodrigue 2001).

The city of Houma was incorporated in 1848 and remains the only incorporated community in the parish. The Civil War, and particularly its end, brought major changes (see also Austin 2006). In September 1864, Louisiana's constitution was amended to formally abolish slavery, and two years later, freedmen became legally eligible to acquire and settle on public land. Though rife with problems, the implementation of the law, combined with the settlement of many former slaves on the plantations where they continued to work, contributed to the establishment of small black communities across southern Louisiana. Bayou residents had long

⁵ Less than 1/18th by one estimate (see Wurzlown nd).

survived from the land, but during this period of economic hard times the stereotypical “Cajun” lifestyle came to dominate, wherein people survived through lumberjacking, trapping, hunting, moss gathering, and fishing, supplemented by small-scale agriculture. With the family as the primary social unit, large families were common and knowledge and skills were passed down from one generation to the next.

During the latter part of the 1800s, the railroad was completed to Houma and canals were dug throughout the parish to facilitate travel, and especially waterborne transport of sugar and timber, primarily on steamboats and barges. By the end of the century, the oyster shipping industry, too, was important due to Houma’s proximity to the oyster beds located in parish waters, and the city was a principal shipping point for Gulf Coast oysters. Oysters were shipped across the United States and as far south as Mexico City; 25 million oysters were shipped from Houma in one season in the late 1890s (Wurzlow n.d.).

The 20th century brought many changes, stemming from the discovery of oil and gas in the parish in 1929. That same year, the Intracoastal Waterway was constructed through Houma. In the 1930s, large quantities of jumbo shrimp were discovered off Louisiana’s coast, leading to the emergence of commercial shrimping as a major economic force. The onshore oil industry boomed in the 1940s, followed by the first successful offshore petroleum well completed in 1947. In order to keep up with the demands of offshore drilling, oilfield service companies became concentrated in Houma and lower Terrebonne in the 1950s and 1960s. The Houma Navigation Canal opened in 1962, allowing service companies convenient access to the Gulf.

The 20th century saw the decline of the sugar and timber industries. The latter experienced several up and down cycles through the early 1900s as timber companies exhausted their supplies of lumber and then liquidated; by the early 1930s little more than 1% of the cypress forests remained in southern Louisiana, and the industry was almost completely gone (Norgress 1947). The Intracoastal Waterway and Houma Navigation Canal had positive effects on waterborne transportation but helped carve up the fragile wetlands, moving storm water inland and increasing the rate of coastal erosion (Good et al. 1995).

In the transition from sugar and timber to oil and gas, some land development companies obtained cutover cypress land at very low prices because the land was no longer generating enough income to cover the taxes on it, and some timber companies held onto their land to lease it for exploration. Some tracts of wetlands that had been undesirable for agriculture or timber removal acquired value for the oil that lay below the surface (Austin 2006). In the end, a few large landholders retained control of much of the land in the parish. Once they possessed the land, the oil companies also continued to generate resources from the animals that lived upon it, leasing land for hunting and trapping and hiring local Native Americans to trap furs on a piecemeal basis.

Due to their skill in trapping, some Native Americans were recruited to new regions, as far away as St. Bernard Parish, establishing Native American enclaves in those locations. In 1941, anthropologist Frank Speck (1941: 49) observed, “There are no Houma individuals or families of pure blood. The present population so classified comprises elements of other Indian descent (early historic Choctaw, Biloxi, Chitimacha), early Spanish, French and unspecified American, besides several recent accessions of Filipinos by marriage. Some families of Houma descent have intermarried with mulattoes, which circumstance has been cause for classification of the whole group as such by local partisans of racial segregation.” Nevertheless, most of the Native Americans who live in Terrebonne Parish identified themselves as Houma through much of the 20th century. As noted by Burley (2007: 356): “For most Native Americans, their ethnicity is not

physically obvious. However, these Terrebonne respondents, mostly deriving from the Houma Tribe, strongly self-identify as Native American” (see also Section 4.4).

Due to its size and labor needs, the oil and gas industry attracted experienced oilfield workers. In the 1950s, Terrebonne Parish experienced a 40.5% increase in population and the beginning of a demographic shift toward younger residents. Like their neighbors to the east, many locals incorporated oil industry jobs into their seasonal occupational patterns (Austin 2006; Gramling 1989). As the oilfield continued to expand, companies looked for new pools of labor and, by the late 1960s, this demand, along with national policies aimed at desegregating schools and workplaces, facilitated the entry of blacks and Native Americans into the oil and gas industry. Lack of formal education and resistance to integration prevented the new workers from getting the best jobs, but labor shortages pushed many companies to hire non-white workers. Though high paying jobs initially served to deter young people from staying in school, this, too, changed as the oil industry required better educated employees. Terrebonne Parish graduate rates grew from 1.8% between 1931 and 1936, to 3.1% by the late 1950s (Hanley 1964). By 2010, 73% of people over the age of 25 were high school graduates (U.S. Census Bureau 2010).

As the petroleum industry matured, Terrebonne Parish became a focal point for the development of specialized service sectors comprised of fabrication and shipyards; boat, helicopter, and trucking operations; and pipeline and wireline companies. Onshore and offshore activity peaked by 1970 but continued at a high level into the 1980s. As the recession worsened across the United States in the late 1970s, unemployed workers flocked to the region. Vietnamese immigrants began moving into Terrebonne Parish in the late 1970s to the early 1980s, drawn there by work as captains and deckhands on large shrimp trawlers and tuna long-lining boats owned and operated by other Vietnamese.

The 1980s downturn had serious consequences for Terrebonne Parish. Many who could not find work left, triggering other effects. For example, H.M. Burgeois High School in Houma went from 1,387 students in 1980 to 900 in 1987 (Wallace et al. 2001); the parish cut teacher salaries and experienced a 41-day teachers’ strike. Industry restructuring during the 1980s and 1990s reduced the number of workers at all levels and consolidated managerial and engineering functions in Houston, moving them away from the coastal parishes and even New Orleans.

Terrebonne Parish has also faced significant environmental problems and experienced some of the highest rates of land loss in the region. Challenged by its huge size, the lack of high ground, and resistance from private property owners, the parish failed to construct a levee system. During the 20th century, cypress forests that had survived the timber industry, because they were too remote or hard to reach, succumbed to saltwater intrusion. In the 1970s, responding to national policies of the decade, including requirements for coastal zone management, the Louisiana state legislature established a commission on coastal and marine resources, and the first comprehensive assessment of coastal erosion in Louisiana was undertaken. Yet, little action was taken until the late 1980s, when the oil and gas industry was suffering and wetlands loss was linked to increased hurricane threat and to the loss of important estuary functions (see also Section 8.2.2).

During the 1990s and into the 21st century, the oil and gas industry rebounded, but employment in petroleum-related jobs remained low (Deseran and Tobin 2003). As the industry moved farther offshore, into deepwater, new seismic technologies helped extend the life of onshore fields, but parish revenues did not return to earlier levels. Many service companies adapted to serve the expansion into the Gulf, and many began working overseas. Offshore

fabricators and large vessel owners sought deeper and wider channels, but concerns about ongoing erosion and flooding caused some to resist the demands.

As concerns proliferated around coastal erosion and hurricane protection, in 1992 the U.S. House of Representatives mandated a reconnaissance study for the Morganza to the Gulf Hurricane Protection Project, a lock, levee, and floodgate system designed to protect Lafourche and Terrebonne parishes from storm surge (see Figure 9.2). That study was completed in 1994, a feasibility study was completed in March 2002, and an engineering and design process is underway. The project includes eventual plans for a lock in the Houma Navigation Canal, a canal running from the city of Houma to the Gulf of Mexico; construction of a floodgate is expected to be completed in 2013 (USACE n.d.).

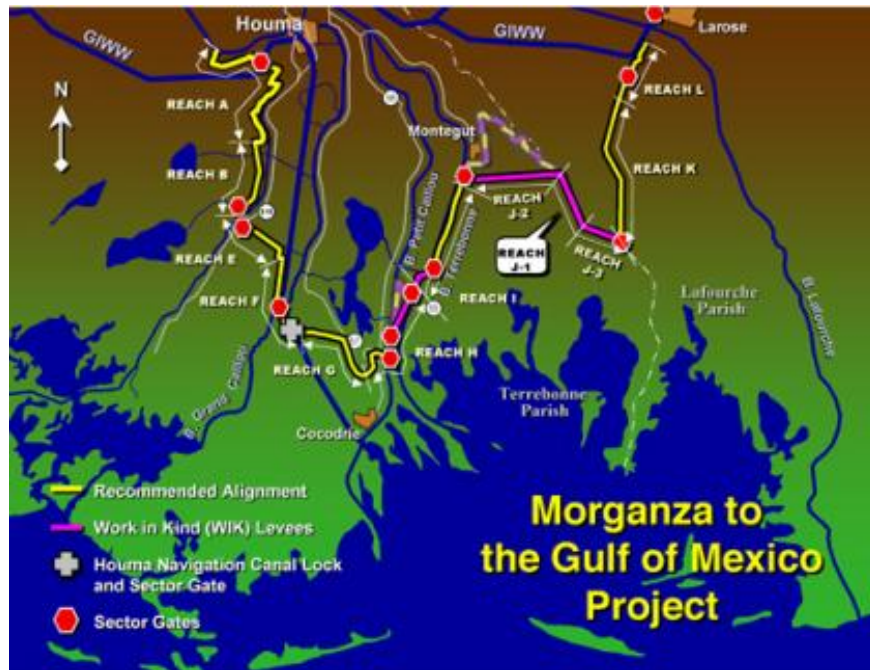


Figure 9.2. The Morganza to the Gulf Hurricane Protection Project
Source: USACE 2008

9.2. DULAC AND ITS ENVIRONS

Dulac sits 17 miles south of Houma surrounded by open water, grass, and marshland. Residents define Dulac as the area south from the Combon Bridge until Four Points Landing, everything west of the Houma Navigational Canal until Boudreaux's Lake, Lake Quitman, and Sweetwater Pond (Figure 9.3). The area's earliest settlers were the Native Americans who were primarily trappers and fishermen. They named the area Dulac, meaning "the land of the lake," in reference to Boudreaux's Lake (Dulac Community Center 2012). Today, the community still relies heavily on the fishing industry, though recent threats from foreign imports, high fuel prices, and negative perceptions of Gulf Coast seafood following the *Deepwater Horizon* disaster have further impacted and already-stressed industry. This bayou community exemplifies the

challenges to coastal communities following multiple hurricanes, the up and down turns in the oil and gas industry, and the oil spill disaster.

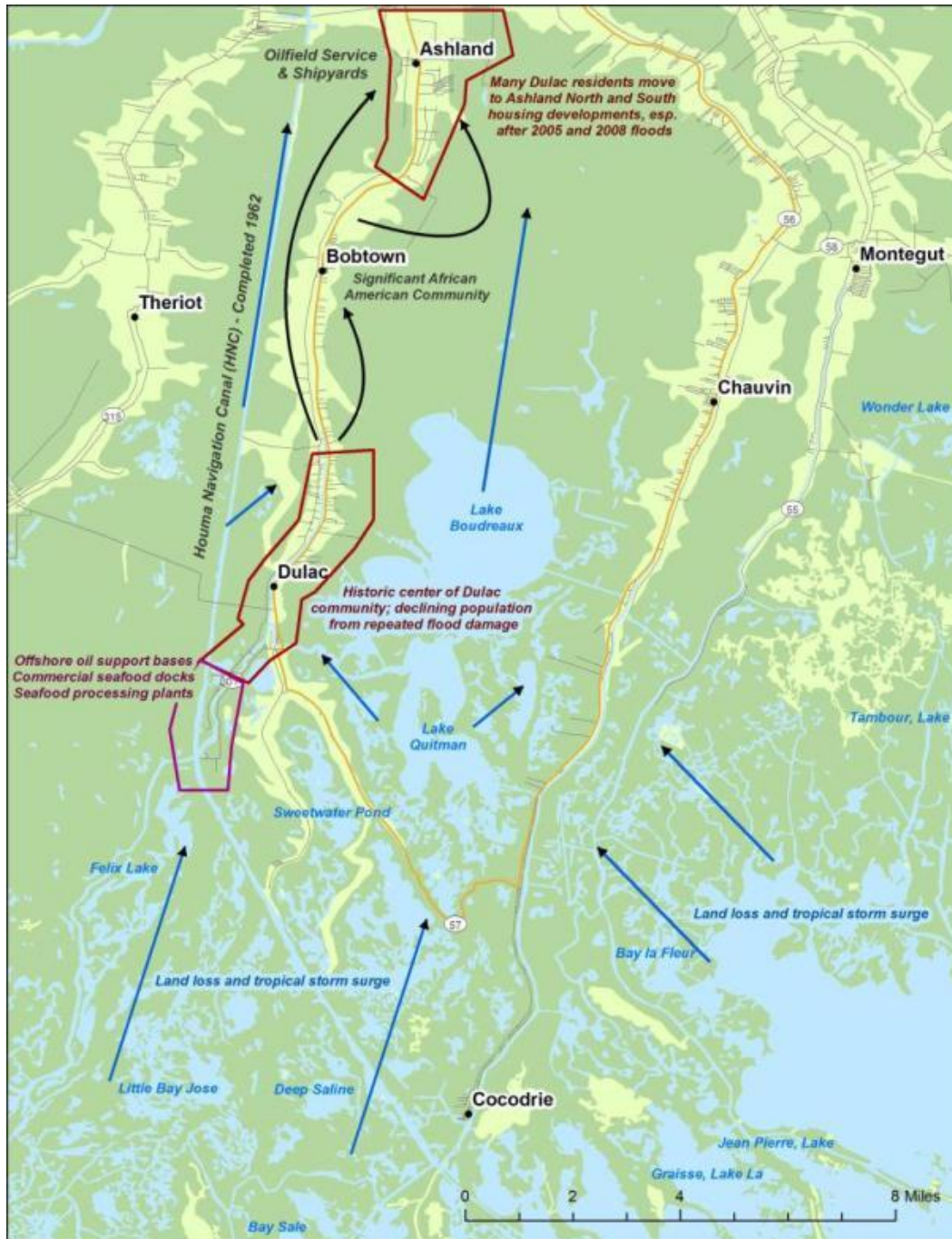


Figure 9.3. Map of Dulac as defined by local residents, compiled from ethnographers' notes
Source: Ben McMahan

The people of Dulac express pride in their self-reliance and maintain a strong desire to remain in their community due to their historical connection to the land. Many residents reported that they had lived in the area their whole lives, as had their parents, and had no intention of leaving, “I been raised here, and I’m gonna die here” (DA522 2011). Many Cajun and Houma people over the age of 60 speak French as their first language. They reported that their community was characterized by strong values and loyalty to their families. “Cajun culture is all about family. They will work their fingers to the bone and get up the next day to do it again” (JW408a 2011). Yet, Dulac residents are aware of the challenges they face and expressed a desire for steady work, enough to feed and care for their family, and adequate flood protection. The decline in fishing has led some parents to encourage their children to focus on education instead of relying on the traditional fishing career. Younger residents often commute to Houma for greater employment opportunities. As a result, the population of the community has declined significantly since 2000 as residents have been forced to move due to repeated flooding, inability to get insurance, and a lack of local economic opportunities (Table 9.1).

Table 9.1. Change in Dulac Population, by Census-Designated Race

Population	2000	2010
Total	2,458	1,463
White	1,327	709
African American	61	28
Asian	12	11
American Indian	969	617
Other	12	12
Identified by two or more races	77	86

Source: U.S. Census Bureau 2000, 2010: Population Finder

9.2.1. Historical Narrative

Dulac’s history can be traced through cycles of natural resource extraction. Lumber production was at its peak between 1890 and 1925 in Louisiana (Connor and Toliver 1990), and the land around Dulac was recognized for the value of the timber growing on it. James Bowie, a southern hero killed at the Alamo, purchased much of Lafourche, Terrebonne, and St. Mary parishes and began harvesting cypress trees. Sugar cane was also a valuable commodity by this time. Bowie established a plantation in the northern part of the parish, and around 1929 sold land in the southern part to John Quitman, a politician from Mississippi. Others, too, purchased land and established plantations, and the area around Dulac soon became home to the Live Oaks, Woodlawn, and Eslee plantations. The timber industry had almost disappeared by the early 1930s owing to the Great Depression and the fact that less than 2% of cypress forests remained in southern Louisiana (Norgress 1947).

Local residents, too, rose to prominence. For example, Harry Bourg, a descendent of early French families to the region, was born on June 2, 1888 in Grand Caillou. He started shrimping with his father and brother as a young boy, was given his first boat when he was 19 years old, married Louise Samanie from Bayou Cane in 1908, and began to acquire more boats

and build his shrimping business. Around 1910, he built the first shrimp-drying platform in the area. He began to loan money to his relatives and neighbors who needed assistance, and when they were unable to repay him, he would take their land as compensation. By 1937, he owned 15,000 acres in the area. He donated money and land for the Catholic church, cemetery, and a school. In 1955, he formed the Harry Bourg Corporation in order to manage his property. Today that land is leased for fishing, hunting, residential homes, campsites, commercial dock space, cattle, and oil and gas exploration.

With easy access to both inland waters and the Gulf of Mexico, Dulac became a center for the shrimping industry, and numerous docks and factories soon lined the bayous and waterways leading into the community. In the 1930s, large quantities of jumbo shrimp were discovered off the Louisiana coast, creating a major economic boon for Dulac. In 1936, the Dulac Bridge was built next to the first store in Dulac (DA532 2011).

The discovery of oil and gas in the region also brought many changes to Dulac. In 1936, Foch Oil Company put in Dulac's first oil well and constructed Foch Canal. In July 1938, the deepest producing oil well at the time was discovered on Harry Bourg's property by Superior Oil Company, one of Bourg's longstanding lease partners. As onshore oil production boomed in the 1940s, so did the community as service companies and other profitable enterprises moved to Dulac. Residents recalled stores, as many as six to eight stores per mile, lining the road leading into the community.

Like its neighbors, Dulac's history has been strongly influenced by the churches that have been established there. The Holy Family Catholic Church was established along Bayou Grand Cailiou in 1952 (Diocese of Houma-Thibodaux 2007), with segregated pews for the whites and Native Americans. The Methodist Church began providing hurricane assistance to residents in the 1920s and, upon seeing the lack of schools for Native Americans in the community, a church educator convinced the church to acquire land for homes and a community center. In 1942, the church purchased a section of land between Grand Caillou and Little Caillou bayous and built the Dulac Community Center there in 1950. That same year, the Women's Division of Christian Service (WDCS), due to the efforts of Miss Ella Hooper, constructed a school consisting of three large classrooms and teacher living quarters built in ten-foot pilings. In 1951, the WDCS hired Bill and Renta Turner to oversee the Dulac Indian Mission, funding the school through community service projects. In 1952, the Turners convinced WDCS to hire a public health nurse to live and work at the Mission, adding a clinic and living quarters next to the garage below the school. The Turners and other community members began to pressure the school board to begin providing public schooling for the Indians, and in 1953 the parish built them a school across the road from the Dulac Indian Mission. In 1954, the remaining students at the Dulac Indian Mission were transferred to public schools and the Mission turned its focus to community service, offering kindergarten, adult literacy classes, religious instruction, dances, motion pictures, visitation, and teenage and craft programs. The community center served as a special "refuge" for the Native Americans, especially children, when they were not allowed at the Dulac Recreation Center located in the central part of the community (DA).

The development of the offshore petroleum industry and concentration of oilfield service companies in Houma and lower Terrebonne was hastened by the opening of the Houma Navigational Canal in 1962. The Canal offered tremendous economic opportunity for companies operating out of Houma, so construction ensued despite protest from Dulac residents who were concerned about saltwater intrusion. Following completion of the canal, several oilfield service companies, such as Halliburton and Baroid opened facilities in Dulac.

It became a great jumping off point for bringing in supplies, service equipment out to the rigs. It's one of the closest places you could get to. You could load in Houma, but then you had three hours to float it down the canal. Or a truck could drive 20 or 30 minutes to Dulac. It was economically feasible to start using Dulac as a jumping off point (DA535 2011).

Simultaneously, in the late 1950s and early '60s, Dulac had the largest shrimp landings in the United States, a status held by Morgan City in the 1930s, '40s, and early '50s.

The booming oil sector brought Anglo and Cajun immigrants to the community during this period. Residents reported that people from Tennessee, Mississippi, Alabama, Texas and Arkansas moved their families to the area seeking jobs. The newcomers contributed to the social and religious diversification of the area. Grand Caillou Baptist Church began as a chapel constructed on Grand Caillou Road in 1956 with support from the Georgia Barnett Home Missions Offerings, the Louisiana Baptist Convention, and other Southern Baptist churches and individuals (Grand Caillou Baptist Church 2011). The church was moved by truck to Dulac in 1976.

By the late 1950s and '60s, about 50 stores operated below Ashland, with three banks on Grand Calliou Road, seven or eight shrimp processors, several grocery stores, a shipyard, a movie theater (5 cents per show), two or three barbers, a drug store, and a clothing store (DA530a 2011). Taking advantage of the easy access to the Gulf from Dulac, the Coast Guard built a station in the late 1950s in order to assist with disaster relief and monitor fishing activities.

Hurricanes have also been an integral factor in Dulac's history and, due to ongoing land loss between the community and the Gulf of Mexico, the impacts of the storms have continued to grow. Hilda, in 1964, was responsible for the first major flooding that Dulac residents experienced, with water reaching the Bobtown Bridge for the first time that year; every year since the water has reached farther up the bayous and to a higher elevation (DA530a 2011). The Prayer for Hurricane Season, though composed by a priest from Cameron Parish and dedicated to the victims of Hurricane Audrey in 1957, is said at every mass during hurricane season. An excerpt from the prayer, which reminds all of the risks they face:

We live in the shadow of a danger over which we have no control: the Gulf, like a provoked and angry giant, can awake from its seeming lethargy, overstep its conventional boundaries, invade our land and spread chaos and disaster. During this hurricane season we turn to you, O Loving Father. Spare us from past tragedies whose memories are still so vivid and whose wounds seem to refuse to heal with the passing of time.

Over the years, Dulac-Chauvin has consistently ranked in the top 10 U.S. ports for value of fishing landings (Table 9.2). The petroleum and fishing industries brought economic opportunities for some residents, but Native Americans and others who had not completed high school did not reap the benefits because they were largely restricted to performing unskilled labor, working in maintenance, as deckhands, and in the shrimp factories. As the petroleum industry expanded, so too did opportunities for people of color, though Native Americans and blacks were hired into lower level jobs; it was in the 1970s that the first Native Americans in Dulac started working for a major oil company (SK001 2003). Those accustomed to working on

the water found employment on oilfield vessels while they remained involved in fishing and trapping (Austin 2006). A consequence of the increasing educational opportunities and integration of Dulac residents into oilfield jobs was the shift to English as the dominant language. Residents reported that, from the 1960s on, the French language was not passed down to the next generation. Thus, children born in the 1950s and '60s could understand French, but they had limited ability to speak it.

Table 9.2. Landings in Dulac-Chauvin

Year		
	Quantity (million pounds)	Value (million dollars)
2011	43.3	62.5
2010	32.8	45.1
2009	42.4	50.9
2008	35.6	48.9
2007	23.5	35.5
2006	30.8	35.7
2005	42.6	54.6
2004	40.4	42.8
2003	39.4	42.3
2002	42.7	46.2
2001	46.2	60.9
2000	48.2	68.1
1999	42.0	49.0
1998	30.5	38.7
1997	32.5	42.1
1996	38.3	45.2
1995	123.3	53.4
1994	217.0	55.0
1993	142.4	48.0
1992	66.0	52.8
1991	166.8	52.1
1990	164.4	52.7
1989	210.9	50.0
1988	244.1	56.5
1987	331.7	65.6
1986	294.6	71.0
1985	398.6	59.9
1984	327.2	59.7
1983	269.2	47.7
1982	265.6	51.7
1981	203.0	55.2

Source: NMFS n.d.

A few Vietnamese families moved into Dulac in the late 1970s to trawl. Some community members and shrimp dock owners created strong relationships with the Vietnamese. One dock owner learned the language and hired them to run boats out of his dock (DA522 2011). Today, almost all Vietnamese families have moved out of the community, largely due to hurricanes. However, the Vietnamese community still remains linked to Dulac through work in

the seafood industry, but their homes, churches, and temples are elsewhere, mostly in east Houma and New Orleans. Most often, they commute from those residential areas to the boat launches and shrimp docks of Dulac.

9.2.2. Entering the 21st Century, Hurricane Katrina and the pre-Deepwater Horizon Disaster Social and Economic Landscape

Dulac's location along the Houma Navigation Canal gave it particular advantages until the development of Port Fourchon, at the end of Bayou Lafourche, in 1990. Slowly, service companies like Baroid and Magnum Mud migrated to Fourchon. Most of Dulac's docks remain vacant, with only locals remembering companies such as Western, B&B, Louisiana Mud, Bayron, Enstein, and Halliburton.

Even with the decline in oilfield activity in the area, fishing and oil remained intertwined in the lives of Dulac residents. As offshore petroleum development expanded, salaries increased, and some residents abandoned the \$2.00 per pound shrimping for a steady paycheck with one of the majors, or the companies they contracted with. An unintended consequence was increased challenges finding employees for the shrimp factories. When that happened, the factories began to close.

Despite its decline, at the time of this study, Dulac residents were participating in all aspects of the fishing industry. They own and operate their own boats, serve as deckhands on others' boats, own docks, and work in the processing sheds and restaurants that line the bayou running through their town. Fishermen often start out as deckhands on their father or relative's boat, learning the trade that will become their livelihood. Residents emphasized that, for them, fishing is not just a job but is a way of life. Often, it is a family affair where the wife and children will accompany the husband and crew on the vessel for a few days at a time. Fishing creates a partnership between husbands and wives; as in other study areas, in cases where the men cannot read or write, the women take care of the financial and insurance records. At the same time, some have argued that the industry has maintained economic inequality in the area: "The plantation mentality lies deeply within the fishing industry. People believe they can never grow to be anything more than what they are" (JW407 2011).

The fishing industry and oilfield are the two major driving economic forces for the area. However, falling shrimp prices, coupled with high fuel costs, have affected shrimpers in this area as well. Fishermen argued that they suffered at the mercy of the docks which were paying the lowest price for shrimp that they could remember (see Chapter 2, Volume II). In recent years, foreign imports have been the major source of competition for local fishermen, but allegations of price-fixing and mislabeling imported shrimp as Gulf shrimp have fallen on local processors (Hedlund 2009). Following the spill, shrimp docks and processors attributed the meager price to low market demand due to health concerns from the spill.

Dulac residents also entered the 21st century facing enormous long-term challenges, probably the most significant of which is land erosion. As many as 35 square miles of coastal land are lost annually in Louisiana due primarily to human-caused changes to the environment (Good et al. 1995). Levees along the Mississippi provide protection from flooding but also prevent sediment needed for natural land repair from descending to the lower bayou. Alongside the problems associated with levees have been the neglectful practices of petroleum companies. Coastal geologists have suggested that the extraction of gas and oil from the ground has caused

the land to sink (Burley et al, 2007). Local residents commonly cite oil and gas drilling as a cause of coastal land loss.

When the oilfield came in and started booming, there were very little restrictions. Oil companies were drilling... They'd run through the marsh and drag boats. They would find the spot, drag a line, dig a slip, run a pipeline, and leave that canal there. More and more land became water. The storms came in. Before long it was all open water. They never came back and closed the canals. Back then it was mostly Texaco, and then Texaco and Superior Oil Companies sold their holdings after tearing up the parish... A few people got rich, but most got flooded (DA535 2011).

The Morganza to the Gulf Hurricane Protection Project includes a floodgate on the Houma Navigation Canal, but the plan originally placed the gate north of Dulac. In the planning process, various committees were formed and, through active participation, Dulac residents made their voices heard, getting assistance from the Louisiana Methodist Conference. A longtime resident stated, "If the levee district would have had it their way we would have been outside [the floodgate]" (DA526 2011).

The Dulac Community Center continued to serve as one of the central hubs for community activity, including being the site where emergency supplies are distributed. The community center has partnered with the United Houma Nation (UHN) and the Intertribal Council of Louisiana and with various non-profit organizations such as the Salvation Army, American Red Cross, and many church-affiliated humanitarian groups. In 1992, Hurricane Andrew flooded the facilities (Dulac Community Center n.d.). The UHN received a large grant from the U.S. Administration for Native Americans which was used to help tribal members across southern Louisiana rebuild after the storm, and many tribal members in Dulac received assistance. The United Methodist Committee on Relief and the Louisiana Conference reconstructed the community center building. The elevated administration building was again dedicated to the Hooper sisters. A woman in Dulac recalled being shocked by the one inch of water brought into her home from Andrew but she noted that residents soon realized that flooding would only intensify in the coming years (JW412 2011).

Storms and the migration of residents away from the coast prompted churches to move as well. Grand Caillou Baptist was constituted as a church in 1997. "In November of 2003, due to the migration of the community and changing ministry needs, Grand Caillou Baptist has moved to Ashland South. The 7 mile migration was necessary because of the northward migration of the population to escape flooding due to saltwater intrusion, coastal erosion, and continual storm surges (Grand Caillou Baptist Church 2011).

In 2000, the Dulac Community Center began bringing health services to Dulac. A grant to bring a Teche Action Clinic to the center was in sight, but after Hurricane Lily in 2002 flooded the community center officials opted to move the clinic up the bayou to a less flood-prone area. UHN tribal leaders organized to get assistance from private donors and international relief organizations to local residents and helped clean and restore the center.

Then, in 2005, Hurricane Katrina charged through the Gulf leaving mayhem in its wake. Though Dulac was not in the direct path of the storm, residents were affected by flooding and also by their awareness of what had happened elsewhere. At the time of this study, local attitudes toward hurricanes varied, but many people argued that it was their responsibility to repair their homes and community. In the words of one resident, "People in New Orleans were waiting for

the government to come clean out their houses. Down here, you get in there, clean up, and thank God you're alive" (JW412 2011). Less than two months later, Hurricane Rita hammered through the area leaving the highest water levels residents had ever seen. Residents confirmed that flood insurance became increasingly expensive after 2005 and building regulations required costly modifications. Several non-profit and government programs provide assistance with raising homes, but the process is slow and discouraging; at the time of this study some people had been waiting more than three years to have their homes raised, holding their breaths through each hurricane season.

The Dulac Community Center began hosting volunteers in the 1950s, and, at the time of the study, some groups had been sending representatives to Dulac to lead vacation Bible school for almost 30 years. After Katrina, the community center saw an influx of social services and gained partnerships with Bayou Grace, Bayou Interfaith Shared Community Organizing (BISCO), the Children's Coalition for the Bayou Region, and others. These partnerships allowed the center to network with other organizations, schools, and civil services. However, around 2008 most partnerships dissipated, due to reduced funding, leaving a void in the community (Austin Field notes, March 9, 2012). As partnerships dissolved and residents continually moved out of the area, the community center saw a decline in volunteerism from the community. Younger residents are not as tied to the community center as in the past when, lacking transportation, they had few options for entertainment and social gatherings.

Bayou residents' fears were confirmed when Hurricane Gustav brought water into Houma for the first time in 2008. Even before Gustav completely expended, Ike was brewing over the Cape Verde Islands. Hurricane Ike again caused major flood and wind damage to the area. A consequence of this repeated flooding, and residents' inability to get insurance, has been the steady out-migration to areas farther north in the parish. Although residents are hesitant to leave their homes, the fear of losing everything drives them north. According to U.S. Census data, between 2000 and 2010, Dulac lost 40% of its population. One resident explained,

I built a house in 1980 on Shrimper's Row. It was eight inches above where FEMA told me to build. Over the next 20 years, the house flooded four times. FEMA told me we're not going to pay you anymore unless you raise it again. They bought me out. I moved eight miles further north, in Bobtown (DA535 2011).

The outmigration of residents has had major effects on the community as the dwindling population can no longer sustain basic services. Shrimp sheds now transport people in from Houma and Ashland to meet labor demands. Similarly, two family owned grocery stores in the area closed after the most recent storms due to extensive flood damage. The marinas tried to offer staple goods to pick up the slack, but people are traveling to Houma for most goods and services. Local restaurants cannot buy directly from fishermen due to health regulations, so even restaurant owners buy food in Houma. Some doubt that the community will ever rebound. According to one parish leader, "Some things you cannot fix. Look at the houses of people in Dulac. Those people are not getting 100,000 dollars a year. If you were in the oilfield, would you live there? They are moving into subdivisions further up. If you don't have people living down there, I can't expect the federal government to invest a lot of money revitalizing the area. It may have gone too far" (DA535 2011).

Increasing storm intensity has also affected the schools in Dulac. By Hurricane Ike, Grand Caillou Elementary School had been flooded five times. School district officials decided

to trade school locations and move Grand Caillou Middle School south to Dulac, so if there was an evacuation it would be less traumatic for older children. Also, there was no library in Dulac after 2005 because of multiple floods, but a new raised building was opened in October 2009.

Yet the residents who remain exhibit the same tenacity as their forebears. Despite the devastating damage hurricanes leave behind, the community pulls together to help rebuild. Multiple people recounted bringing supplies to neighbors and cleaning out homes. A marina owner said that 12 people came to help replace his roof after the recent storms, and a couple opened their home to feed and bathe 30 people (JW407 2011; DA525 2011; DA530a 2011). A few new businesses have moved into the area. A couple that began with a single boat now owns three vessels and two shrimp docks, and sells ice and fuel. And, although many people have moved north to avoid flooding, many church members return to Dulac weekly to attend service and maintain ties with the community. Residents explained that people want to preserve their relationship and sense of belonging to the community, though they recognize that the community is not what it once was. They also expressed hope that the levee system would put the town back on the map as a convenient location to access the Gulf. According to a longtime community leader, “I really believe that we do stand a chance to be in the middle of a lot of growth, not only in residences, but industry because the closer you are to the Gulf, the more industry is going to want to be close to you, to minimize their expenses” (DA526 2011). Remaining business include nine oilfield service companies, three marinas, one marine service company, one shipyard, three restaurants, around 10 seafood businesses (docks and processors), one hardware store, two gas stations, and Dollar General.

In the midst of all this change, many Dulac residents remain in fishing. They are sometimes criticized for their unwillingness to change and adopt new livelihood strategies. Yet, literacy levels remain low and many of the older residents, remembering negative experiences at school, are intimidated by the classroom. New certifications for offshore work require written tests and proficiency with computers. For some, current requirements are reminiscent of the 1970s when fishermen had to obtain fishing licenses and offshore mariners had to become licensed to operate vessels in the Gulf of Mexico. Residents also expressed pride in their self-reliance and how, until recently, they had not asked for help from outsiders or had a hard time finding a job. And fishing has played a major role. According to a lifelong resident and descendant of Harry Bourg, “Once the fishing industry dies so will the community of Dulac” (DA532 2011).

9.3. SPECIFIC EFFECTS OF THE SPILL

The *Deepwater Horizon* disaster left the parish, and the community of Dulac, in turmoil; while some immediately prepared their boats for cleanup response, others scrambled to file emergency claims with hopes of avoiding a massive financial hit. Prior to the spill, Terrebonne Parish had among the lowest unemployment rates in the state and was gearing up to expand drilling technology. Some argued that the spill drove away oilfield service companies because of the halt in drilling permits coupled with concerns about what would become of the drilling industry in the Gulf. The parish was about to break ground on a cold storage facility funded by a \$4 million grant from the recovery of Katrina, Rita, Gustav, and Ike, but investors pulled out after the spill due to uncertainties about seafood (JW410b 2011).

As in other bayou communities, the moratorium on deepwater drilling and fishery closings were the most apparent repercussions residents faced after the disaster. As a Disaster Claims and Outreach Coordinator stated, “The biggest issues I’m seeing now are fear and uncertainty. Fishermen have worked side by side with the oilfield for years. Now there are economic setbacks that affect every business. It’s a ripple effect” (JW410b 2011). Daily life, too, was affected in myriad ways. Even 15 months after the spill, a shrimper’s wife noted that she could not take her grandchildren to the beach to go swimming, and the children were not being allowed to eat the fish they were catching in the bayou (JW406a 2011).

Social networks within the churches and community center were important as residents began to respond to the disaster. The United Houma Nation, also, served as an important vehicle for getting information into and out of the community.

In response to the spill, the Louisiana Department of Wildlife and Fisheries (LDWF) began restricting fishermen from entering designated fishing areas at the end of April 2010 just as the brown shrimp season was about to begin. The fishing closures continued throughout the year, which in turn hurt the entire industry. One of the main issues with the closures was that fishermen did not know which areas were open and which waters were off limits. LDWF would fax notifications of closures to marinas and post the information online, but not all fishermen launch from a marina or have Internet access. Fishermen’s frustrations grew as information was ever changing and unclear and they faced rising financial insecurity. Both fishermen and seafood processors reported that the fishing industry had been looking up in the years prior to the spill, but that, due particularly to negative perceptions of seafood safety following the spill, the industry had been left in shambles.

In May 2010, BP dispatched hundreds of representatives to manage disaster relief offices and the Vessels of Opportunity (VOO) cleanup program. The nearest BP Central Operations Center for Response was located just under 20 miles north in Houma, and the main response site for VOO was about 14 miles south in Cocodrie. Terrebonne Parish officials noted that the effects of the spill were very uneven as BP relief monies helped a lot of the businesses but were unavailable to others. Small restaurants suffered because BP representatives had their meals catered, and their local customers in the bayou were being conservative with their money due to economic uncertainties. VOO served as a financial buffer for some fishermen who signed up early and were paid well, but the program lasted only through the fall and not everyone who signed up was hired. Some were reluctant to clean up what they considered to be BP’s mess and did not participate.

Dulac residents were assisted by representatives from the local economic development office, who took on the responsibility of helping BP communicate to locals about VOO, sign people up, and schedule training sessions, as well as providing technical assistance regarding claims to local businesses. They created a catalog of eligible vessels in the area but, similar to the claims process, reports of lost paperwork raised concern about the integrity of the process and particularly that out-of-state boats were being hired over local boats. Those involved in the process also reported problems with communication between BP and the contractors and delays in payment on claims they filed to BP for compensation for their services.

Following the May 27 suspension of deepwater drilling, with fishing at a standstill and oilfield activity suspended, the people of Dulac reacted as their neighbors elsewhere in the Gulf region did: “They shut down the whole Gulf...When you get in a train wreck you don’t shut down all trains” (DA525 2011). Employees of all economic sectors were affected, but a significant challenge lay in trying to prove what losses the spill caused directly. Fishermen were

the first to feel the effects of the spill, but they reported it was very difficult to measure their losses. Furthermore, truck drivers, service employees, and other oilfield workers were not initially included in the claims process because BP did not determine their losses as a direct impact of the spill, even though they were out of work because of the moratorium.

The moratorium was particularly devastating to commercial fishermen who relied on their oilfield income to sustain their vessels and equipment. Recreational fishermen, too, who worked in the oilfield, and had their hours cut, did not spend money on their boats, thereby affecting the marine supply stores and repair yards farther up the bayou toward Houma. At the same time, the loss of fishermen coming to the area affected the sale of ice, fuel, and other supplies at local gas stations and convenience stores.

Facing a grim economic climate even before the spill, many Dulac residents were living paycheck to paycheck and quickly entered the claims process to collect on their losses. Due to variation in when they filed, their circumstances at the time, and whether they chose to take the emergency payment or one-time settlement, Dulac residents and business owners reported significant differences in who received money and when. In some cases, people with lower incomes received more money than their superiors, and others with identical incomes received different amounts. For example, the owner of a seafood retail business stated, “We filed the 6 month emergency claim. We were battling with people we shouldn’t have had to. They lost our documents twice. With the interim I disagree with their calculation . . . We’ve been doing paperwork for it since January and have yet to see any money” (JW416 2011). The differences were attributed to people filing false claims, the complex claims forms, and underreporting taxes in past years. A marina owner commented on a neighbor, “He has been a fisherman his whole life, but never did his taxes correctly. He’s upset because he can’t get any money from the claim, but he has no problem driving his truck on the roads that tax money pays for. You can’t have it both ways” (JW419b 2011). Inevitably, the claims process had added to the stress of the disaster.

Those who received money from claims used the funds to finance their house or boat, raise and repair homes, or invest in new nets or engines for their boats. Still, stories about how *some* people were spending their money on new vehicles or recreational activities were common.

Subsistence claims presented another major challenge for residents following the spill. The original system, set up by the Gulf Coast Claims Facility (GCCF), did not recognize the cost of seafood consumed by a fishermen’s family as a loss of income. This caused hardships for many because fishermen were not able to supply their family and possibly extended relatives with this food source. As discussed earlier, families are the strongest social unit for people in the area; so the effects on the fishing industry were felt throughout entire families. A parish official explained: “There is a lot of stress because people are not getting the money they need, but also the claims process does not recognize the family and social impacts” (JW410a 2011). In August 2011, the GCCF began to reevaluate subsistence claims, but affidavits are required and adjusters have a one on one meeting with individuals. According to a parish official, “They make it so difficult for people. You pretty much have to have a law degree to know how to answer some of the questions they ask on the claims” (JW410b 2011). In desperation, business owners, fishermen, and others turned to lawyers for assistance with the claims process, but local leaders expressed concern over the amount, as much as 20 to 40%, that some lawyers were taking of the settlement.

The Dulac Community Center partnered with BP briefly to host VOO trainings and a mobile claims office. The center hosted community meetings, dinners, and guest speakers. “The center has partners in Houma that use the facilities for a food bank for Bobtown on down. Last year the community center was assisting two to three families per month, and now they are serving two to three families per day. Since it is considered an emergency food bank people can only use the service once every six months” (DA546 2011).

The community center also helped local residents connect with resources being offered through private and public organizations such as Catholic Social Services and Louisiana Spirit. One particular concern raised in the community was that, after the spill, wives began working outside the home to compensate for their spouse’s low earnings. Fishermen who were used to providing for their families faced lower household incomes and the shame of not being able to fulfill their traditional role. Similarly, fishermen who had been able to save some of their catch to freeze for their family and friends were having to sell the entire catch to cover the increasing overhead cost and low dock prices they were receiving (Austin Field notes March 9, 2012).

In short, adding to the effect of four hurricanes, an unreliable seafood market affected by foreign competitors, high fuel costs, flooding, increased insurance costs, the outmigration of a large proportion of the population, ongoing land loss, the *Deepwater Horizon* disaster presented Dulac residents with major challenges. Despite the daunting circumstances, most remaining residents were trying to find a way forward. Though some expressed hope that the fines resulting from the oil spill would be used to help restore the coast, others were not so confident. In the summer of 2011, a parish leader noted, “I sat with BP folks eight months ago. I said I need 12 billion dollars and permits from the federal government to allow that to happen, to rebuild our coast to where it was 50 years ago. That’s the fix. BP is not going to accept the responsibility for what they and all the others have done over the years. The BP rep asked me, do you expect BP to pay for all that? I said, “You guys could get with all the others...” (DA535 2011).

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The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island communities.

The Bureau of Ocean Energy Management Mission

The Bureau of Ocean Energy Management (BOEM) works to manage the exploration and development of the nation's offshore resources in a way that appropriately balances economic development, energy independence, and environmental protection through oil and gas leases, renewable energy development and environmental reviews and studies.

