

6. COMMUNITY PROFILES

This chapter updates the community information on the HMS fishing communities identified and described in the 2006 Consolidated HMS FMP and its amendments. Background information on the legal requirements and summary information on the community studies conducted to choose the communities profiled in this document is not repeated here and can be found in previous HMS SAFE Reports, and was most recently updated in the 2011 HMS SAFE Report. Additionally, the 2011 and 2012 HMS SAFE Reports contain modified demographic profile tables from previous documents to include the same baseline information for each community profiled, and use 1990, 2000, and 2010 Bureau of the Census data for comparative purposes. A profile for the U.S. Virgin Islands was not created because of the limited availability of 1990, 2000, and 2010 Census data for the region. The descriptive community profiles in the 2011 HMS SAFE Report include information provided by Wilson, et al. (1998) and Kirkley (2005), Impact Assessment, Inc. (2004), and information obtained from MRAG Americas, Inc. (2008), along with 2010 Bureau of the Census data.

Of the communities profiled in previous SAFE Reports, ten were originally selected due to the proportion of HMS landings in the town, the relationship between the geographic communities and the fishing fleets, the existence of other community studies, and input from the HMS and Billfish Advisory Panels (which preceded the combined HMS Advisory Panel that currently exists). The remaining 14 communities, although not selected initially, have been identified as communities that could be impacted by changes to the current HMS regulations because of the number of HMS permits associated with these communities, and their community profile information has been incorporated into the document. The list of communities profiled is not intended to be an exhaustive record of every HMS-related community in the United States; rather the objective is to give a broad perspective of representative areas.

6.1 Community Impacts from Hurricanes

This section is an overview of the impacts on HMS communities caused by hurricanes during 2014. Please refer to prior SAFE reports for hurricane impact information prior to 2014.

The 2014 Atlantic hurricane season was below average (Pasch 2015). The 2014 hurricane season had an average number of hurricanes (6). However, only two hurricanes, Edouard and Gonzalo, intensified into major hurricanes based on the Saffir-Simpson Hurricane Wind Scale and there were also eight named storms, which is less than the long-term averages. Hurricane Arthur was the only hurricane in 2014 that made landfall in the United States. It arrived about five miles west of Cape Lookout, North Carolina on July 4, 2014. After landfall, the hurricane moved northeastward over eastern Carteret county and Pamlico Sound, crossing the Outer Banks just north of Oregon Inlet then accelerated northeastward over into the western Atlantic. One of the hardest hit areas was the Outer Banks which experienced property damage to numerous residences, businesses, and campgrounds from high winds and flooding from the sound-side storm surge. In New England, heavy rainfall caused flooding in parts of southeastern Massachusetts and in Maine strong winds and rain helped to topple numerous large trees and power lines, causing extensive damage and knocking out power for about 20,000 customers. While the hurricane resulted in minor property damage, the insured amounts were less than the \$25 million threshold used to declare a catastrophe.

6.2 Community Impacts from 2010 Deepwater Horizon/BP Oil Spill

On April 20, 2010, an explosion and subsequent fire damaged the Deepwater Horizon MC252 oil rig, which capsized and sank approximately 50 miles southeast of Venice, Louisiana. Oil flowed for 86 days into the Gulf of Mexico from a damaged well head on the sea floor. In response to the Deepwater Horizon MC252 oil spill, NMFS issued a series of emergency rules (75 FR 24822, May 6, 2010; 75 FR 26679, May 12, 2010; 75 FR 27217, May 14, 2010) closing a portion of the Gulf of Mexico exclusive economic zone (EEZ) to all fishing and analyzed the environmental impacts of these closures in an Environmental Assessment. Between May and November 2010, NMFS closed additional portions of the Gulf of Mexico to fishing. The maximum closure was implemented on June 2, 2010, when fishing was prohibited in approximately 37 percent of the Gulf of Mexico EEZ. Significant portions of state territorial waters in Alabama (40%), Florida (2%), Louisiana (55%), and Mississippi (95%) were closed to fishing (Upton, 2011). After November 15, 2010, approximately 0.4 percent (1,041 square miles) of the federal fishing area was kept closed immediately around the Deepwater Horizon wellhead through April 19, 2011, when the final oil spill closure area was lifted (NOAA 2011c).

Socioeconomic impacts from the oil spill on HMS communities include losses in HMS revenue and negative psychological impacts. One study (Sumaila et al, 2012) estimated loss in commercial pelagic fish revenue, which includes HMS species, at \$35-58 million over the next seven years. The study also estimated that Gulf of Mexico recreational fisheries could lose between 11,000-18,000 jobs, and have an overall economic loss between \$2.5-4.2 billion (Sumaila et al, 2012).

On April 20, 2011, BP agreed to provide up to \$1 billion toward Early Restoration projects in the Gulf of Mexico (*Deepwater Horizon* Oil Spill Final Phase IV Early Restoration Plan and Environmental Assessments, 2015). The agreement intends to expedite the start of restoration in the Gulf in advance of the completion of the injury assessment process.

One of the restoration projects is the Pelagic Longline (PLL) Bycatch Reduction Project, which was released in September 2015 and will restore pelagic fish that were affected by the spill. The project aims to reduce the number of fish (including marlin, sharks, bluefin tuna, and smaller individuals of the target species) incidentally caught and killed in PLL fishing gear by compensating PLL fishermen who agree to voluntarily refrain from PLL fishing in the Gulf during an annual six-month “repose” period that coincides with the bluefin tuna spawning season. The project will also provide participating fishermen with two alternative gear types (green-stick gear and/or bouy gear) to allow for the continued harvest of yellowfin tuna and swordfish during the repose period when PLL gear is not used.

Demographic data for coastal counties was evaluated, taking into consideration communities that could be disproportionately affected by this action. It found that while there are dispersed low income, minority Vietnamese-American populations in Louisiana that actively participate in the Gulf of Mexico PLL fishery and commute to fishing ports, the PLL project would not disproportionately affect minority or low income populations. The project is voluntary in nature, and as such, any fishermen in the Gulf of Mexico PLL fishery would choose whether to participate in the repose and alternative gear provisioning. During the repose project, fish dealers, fuel suppliers, and ice/bait/equipment suppliers may experience negative economic effects; however, these effects are anticipated to be minor and short term due to the limited

duration of the repose period. Furthermore, negative economic effects may be partially mitigated by the use of alternative fishing gear. For more information see: <http://www.gulfspillrestoration.noaa.gov/wp-content/uploads/Final-Phase-IV-ERP-EA.pdf> <http://www.noaa.gov/deepwaterhorizon/index.html> and http://sero.nmfs.noaa.gov/deepwater_horizon/index.html.

6.3 Community Impacts of Impediments to Navigation

Access to HMS may be hindered when ocean inlets become difficult to navigate. For example, severe shoaling has been observed in the Oregon Inlet and Hatteras Inlet, NC, causing fishermen and other mariners to either make difficult maneuvers through the shallow inlets or to reroute to Teaches Hole Channel at Ocracoke Inlet to the south or the Intracoastal Waterway via Chesapeake Bay to the north, resulting in higher fuel costs.

Dare County, NC, commissioned a study of the economic impacts of the Oregon Inlet navigability (Moffatt & Nichol, 2014). The study examined the impacts of reduced navigability on five sectors: commercial fishing, seafood packing/processing, boat building and support services, and the recreational fishing (both charter and private sectors). The study found that with the Oregon inlet in its current condition, the five sectors provide a total annual economic impact of 3,319 jobs and \$403.5 million to Dare County and a total of 4,348 jobs and \$548.4 million to North Carolina, including Dare County (Moffatt & Nichol, 2014). If the inlet were fully open, the five sectors studied could potentially provide a total annual economic impact of 5,120 jobs and \$642.2 million to Dare County and a total of 5,397 jobs and \$693 million to the rest of North Carolina (Moffatt & Nichol, 2014).

Commercial fishermen were interviewed about the navigability of Oregon Inlet. If the inlet is not maintained, the interview responses indicated that most commercial fishing vessels would choose to remain in the fishing business but would relocate their fishing operations to other ports (Moffatt & Nichol, 2014).

6.4 Social Indicators of Fishing Community Vulnerability and Resilience

The NMFS Office of Science and Technology presents community profiles by region (e.g., Northeast, mid-Atlantic, Southeast, Gulf of Mexico) at on the following website: <http://www.st.nmfs.noaa.gov/humandimensions/community-profiles/index>. The NMFS Office of Science and Technology presents information on community vulnerability and resilience on its webpage: <http://www.st.nmfs.noaa.gov/humandimensions/social-indicators/index>.

Jepsen and Colburn (2013) developed social indicators of vulnerability and resilience for 25 communities selected for having a greater than average number of HMS permits associated with them. The series of indices they developed used social indicator variables that could assess a coastal community's vulnerability or resilience to potential economic disruptions such as those resulting from drastic changes in fisheries quotas and seasons, or natural and anthropogenic disasters. Indices and index scores were developed using factor analyses of data from the United States Census, permit sales, landings reports, and recreational fishing effort estimates from the MRIP survey (Jepsen and Colburn, 2013). Their results were presented in the 2014 SAFE Report. An update of the 2013 study is forthcoming and will contain updated and new data

including a scope that encompasses communities from the entire United States. Once complete, this update will be included in a future SAFE report.

Chapter 6 References

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