ENVIRONMENTAL ASSESSMENT FOR EMERGENCY ACTION TO CLOSE PORTIONS OF FEDERAL WATERS IN THE SOUTHEASTERN UNITED STATES TO PROHIBIT FISHING IN RESPONSE TO THE DEEPWATER HORIZON OIL SPILL

May 2010

NATIONAL MARINE FISHERIES SERVICE, SOUTHEAST REGIONAL OFFICE
263 13th AVENUE SOUTH
ST. PETERSBURG, FL 33701-5505

Table of Contents

Abbreviations Used in This Document 3
1.0 FINDING NO SIGNIFICANT IMPACTS 4
2.0 INTRODUCTION 9
3.0 MANAGEMENT ALTERNATIVES 11
4.0 AFFECTED ENVIRONMENTS 14
5.0 ENVIRONMENTAL CONSEQUENCES 19
7.0 REFERENCES 23
8.0 LIST OF PREPARERS 25
9.0 LIST OF AGENCIES CONSULTED 25
10.0 LIST OF FISHERY REGULATIONS 25

Abbreviations Used in This Document

APA	Administrative Procedures Act
BiOp	Biological Opinion
CEA	Cumulative Effects Analysis
CEQ	Council on Environmental Quality
DQA	Data Quality Act
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	Essential Fishery Habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FMP	Fishery Management Plan
FONSI	Finding of No Significant Impacts
Gulf	Gulf of Mexico
HMS	Highly Migratory Species
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MMPA	Marine Mammal Protection Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service
Secretary	Secretary of Commerce
SEFSC	Southeast Fisheries Science Center
SERO	Southeast Regional Office (NMFS)

1.0 FINDING NO SIGNIFICANT IMPACTS

National Oceanic and Atmospheric Administration (NOAA) Administrative Order 216-6 (NAO 216-6) (May 20, 1999) contains criteria for determining the significance of the impacts of a proposed action. On July 22, 2005, NOAA published a Policy Directive with guidelines for the preparation of a Finding of No Significant Impact (FONSI). In addition, the CEQ regulations at 40 C.F.R. Section 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity". Each criterion listed below is relevant to making a finding of no significant impact and has been considered individually, as well as in combination with the others. The significance of this action is analyzed based on the NAO 216-6 criteria, the recent Policy Directive from NOAA, and CEQ's context and intensity criteria. These include:

1) Can the proposed action reasonably be expected to jeopardize the sustainability of any target species that may be affected by the action?

Response: No, the proposed action cannot be reasonably expected to jeopardize the sustainability of any target stocks. The proposed action is intended to prohibit fishing and harvesting of marine resources within specified areas affected by the Deepwater Horizon oil spill. Area closures will be adjusted to reflect past, present, and projected future areas affected by the oil spill, and will reduce or eliminate all fishing mortality on all marine fish stocks within the closed area.

2) Can the proposed action reasonably be expected to jeopardize the sustainability of any non-target species?

Response: No, the proposed action cannot be reasonably expected to jeopardize the sustainability of any non-target stocks. The proposed action is intended to prohibit fishing and harvesting of marine resources within specified areas affected by the Deepwater Horizon oil spill. Area closures would be adjusted to reflect past, present, and projected future areas affected by the oil spill, and would reduce or eliminate all fishing mortality on all marine fish stocks within the closed area.

3) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat (EFH) as defined under the Magnuson-Stevens Act and identified in FMPs?

Response: The area to be closed is designated as EFH for several of the Council's managed species and federally managed Atlantic highly migratory species (HMS). The proposed action is not reasonably expected to cause substantial damage to the ocean and coastal habitats and/or EFH. Area closures will be adjusted to reflect past, present, and projected future areas affected by the oil spill, and will reduce or eliminate all fishing mortality on all marine fish stocks within the changing boundaries of the closed area. Reductions in fishing effort can be expected to provide a positive benefit to habitats within any designated closed area by eliminating the impacts of fishing gear, anchoring, or other activities that would impact the benthic or water column habitats during the closed period.

4) Can the proposed action reasonably be expected to have a substantial adverse impact on public health or safety?

Response: No, the proposed action is not reasonably expected to have a substantial adverse impact on public safety or health. The proposed action is intended to prohibit fishing and harvesting of marine resources in the areas impacted by the Deepwater Horizon oil spill, and should have a positive impact on public health and safety.

5) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, their critical habitat, marine mammals, or other non-target species?

Response: No, the proposed action is not expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species. The action may indirectly benefit protected species by reducing the number of vessels in the closed area, thus reducing the potential for ship strikes of marine mammals or sea turtles. Similarly, the prohibition of fishing is expected to reduce the potential for gear entanglements or accidental hooking of marine mammals or sea turtles.

6) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

Response: No, the proposed action is not expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area. Area closures will be adjusted to reflect past, present, and projected future areas affected by the oil spill, and will reduce or eliminate all fishing mortality on all marine resources within the changing boundaries of the closed area. In addition, this will ensure fishermen do not enter areas where oil was present, but is no longer detectable. Reductions in fishing effort from the proposed prohibitions for fishing in the closed areas can be expected to provide a positive benefit to biodiversity and ecosystem function within any designated closed area by eliminating the impacts of fishing gear, anchoring, or other activities that would impact biodiversity or ecosystem function.

7) Are significant social or economic impacts interrelated with natural or physical environmental effects?

Response: No, the proposed action would not create any significant social or economic impacts interrelated with natural or physical environmental effects. The oil spill event itself is expected to lead to significant social and economic impacts on the human environment, but the proposed action to prohibit fishing in areas affected by the oil spill are not expected to exacerbate the situation. Prohibiting fishing for and harvesting marine resources within the closed area affected by the Deepwater Horizon oil spill will have direct and indirect social and economic impacts to that segment of the fisheries dependent on this region and to the shoreside operations that support these fisheries. However, because of the presence of oil in the closed area, fishing and harvesting of marine resources is not expected to occur in areas where oil is present whether the area is closed or not, thus prohibiting this activity is not expected to alter the manner in

which the fisheries would be conducted during this event. Thus, any impacts of the proposed action are not related to, nor have an impact on, the natural or physical environment.

8) Are the effects on the quality of the human environment likely to be highly controversial?

Response: No, the effects on the quality of the human environment are not likely to be highly controversial. Because of the presence of oil in the closed area, fishing and harvesting of marine resources is not expected to occur in areas where oil is present whether the area is closed or not, thus prohibiting this activity is not expected to alter the manner in which the fisheries would be conducted.

9) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers, EFH, or ecologically critical areas?

Response: No, the proposed action is not reasonably expected to result in substantial impacts to unique areas, park land, prime farmlands, wetlands, wild and scenic rivers, EFH, or ecologically critical areas. Park land, prime farmlands, wetlands, wild and scenic rivers are inland and are not affected by this action in federal waters of the Gulf of Mexico. Possible beneficial impacts to EFH are discussed in Question 3. The oil spill event itself is expected to lead to significant impacts on the physical, biological, and human environment, but the proposed action to prohibit fishing in areas affected by the oil spill are not expected to exacerbate the situation. In regard to ecologically critical areas, should closures be required further east and south of the current closure, the Tortugas Marine Sanctuary already is closed to fishing, as are Madison Swanson, Steamboat Lumps, and the Edges ecologically critical areas closed to bottom fishing. Additionally, Desoto Canyon is closed to pelagic longlining. Should future closures be needed to the west of the current spill area, fishing is already prohibited in the Flower Gardens National Marine Sanctuary, and in other EFH areas to the west, including but not limited to, areas such as Stetson Reef. Therefore, there would be no additional impacts on these components of the environment from the proposed action.

10) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

Response: No, the effects on the human environment are not likely to be highly uncertain or involve unique or unknown risks. NOAA Fisheries Service regularly closes fisheries in specific areas when area-specific quotas are met (e.g. king mackerel zones in the Gulf of Mexico), or closes areas in accordance with regulations established from various fishery management plan actions (e.g., Texas Shrimp Closure). Closing areas to fishing does not preclude fishermen from shifting their fishing efforts to areas that are open.

11) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response: No, the proposed action is not related to other actions with individually insignificant but cumulatively significant impacts. The proposed action is temporary, with closed areas being

adjusted according to past, present, and future projections of areas affected by the oil spill. In addition, this will ensure fishermen do not enter areas where oil was present, but is no longer detectable. Because of the presence of oil in the closed area, fishing and harvesting of marine resources is not expected to occur in the area where oil is present whether the area is closed or not, thus prohibiting this activity is not expected to alter the manner in which the fisheries would be conducted during this event. Thus, any impacts of the proposed action are not related to, nor have an impact on, the natural or physical environment. The oil spill event itself is expected to lead to cumulatively significant impacts on the physical, biological, and human environment, but the proposed action to prohibit fishing in areas affected by the oil spill are not expected to exacerbate the situation.

12) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources?

Response: No, the proposed action does not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, as none are designated in the offshore Gulf of Mexico where the temporary fishing and harvesting of marine resource prohibitions will occur. The proposed action is not expected to cause loss or destruction of significant scientific, cultural, or historical resources. Any such areas would be beneficially affected by the prohibition of fishing and harvesting of marine resources.

13) Can the proposed action reasonably be expected to result in the introduction or spread of a non-indigenous species?

Response: No, the proposed action is not reasonably expected to result in the introduction or spread of a non-indigenous species. The proposed action restricts fishing activities and harvesting of marine resources and does not include actions that would lead to the introduction of non-indigenous species. Should marine resources benefit in population growth based on reduced fishing mortality, and those resources feed on non-indigenous species, their increased populations could reduce the spread of non-indigenous species.

14) Is the proposed action likely to establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration?

Response: No, the proposed action does not establish a precedent for future action with significant effects, and it does not represent a decision in principle about future consideration. NOAA Fisheries Service regularly closes fisheries in specific areas when area-specific quotas are met (e.g. king mackerel zones in the Gulf of Mexico), or closes areas in accordance with regulations established from various fishery management plan actions (e.g., Texas Shrimp Closure). Temporarily closing areas to fishing does not preclude fishermen from shifting their fishing efforts to areas that are open. NOAA Fisheries Service can, at any time, change its management strategies to best meet the requirements of the Magnuson-Stevens Act.

15) Can the proposed action reasonably be expected to threaten a violation of Federal, State, or local law or requirements imposed for the protection of the environment?

Response: No, the proposed action is not reasonably expected to threaten a violation of Federal, State, local law, or requirements imposed for the protection of the environment. The proposed action is considered to be in concert with other laws imposed to protect the environment.

16) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response:
No, the proposed action to temporarily restrict fishing activities or harvesting marine resources in areas within the extent of the oil spill is not reasonably expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species. In general, this action will eliminate fishing mortality on these marine resources in the affected area, and should reduce the potential for interactions with protected resources.

DETERMINATION:
In view of the information presented in this document and the analysis contained in the supporting Environmental Assessment prepared for the Emergency Action to Close Portions of Federal Waters in the Gulf of Mexico to Fishing Activities in Response to the Deepwater Horizon Oil Spill, it is hereby determined that this action will not significantly impact the quality of the human environment as described above and in the supporting Environmental Assessment. In addition, all beneficial and adverse impacts of the proposed action have been addressed to reach the conclusion of no significant impacts. Accordingly, preparation of an Environmental Impact Statement (EIS) for this action is not necessary.

Roy E. Crabtree
Regional Administrator
Southeast Regional Office
National Marine Fisheries Service

5/10/10
Date

for Emily Menashes
Acting Director
Office of Sustainable Fisheries
National Marine Fisheries Service

5/10/10
Date

2.0 INTRODUCTION

2.1 Background

On April 20, 2010, an incident involving a deepwater drilling platform occurred approximately 50 miles southeast of Venice, Louisiana. An explosion and subsequent fire damaged the rig which capsized and sank. Oil continues to flow into the Gulf of Mexico (Gulf) at an estimated 5,000 barrels (210,000 gallons) per day from three leaks in damaged piping on the sea floor from the Deepwater Horizon incident recently declared a Spill of National Significance (SONS) on April 29, 2010. A SONS is defined as "a spill that, due to its severity, size, location, actual or potential impact on public health and welfare or the environment, or necessary response effort, is so complex that it requires extraordinary coordination of federal, state, local, and responsible party resources to contain and clean up the discharge" and allows greater federal involvement.

The marine response teams are using various techniques to contain the oil spill. NOAA is assisting the Unified Command in evaluating a new technique to apply dispersants to oil at the source - 5000 feet below the surface, if successful this could keep plumes and sheens from forming. Drilling of a relief or cut-off well is still planned - one drilling rig is on site and one should arrive this weekend, but the process will not be complete for several months. Aircraft have applied over 141,000 gallons of dispersant and will continue as conditions allow. In addition, test burns are being conducted to address the surface oil sheens. Aerial surveys and satellite imagery are being used to map the spatial extent of the oil spill. Daily updates provide forecasts for the trajectory of the oil plumes based on the NOAA Gulf of Mexico, Texas A&M/GLO, and NAVO models using the overflight data.

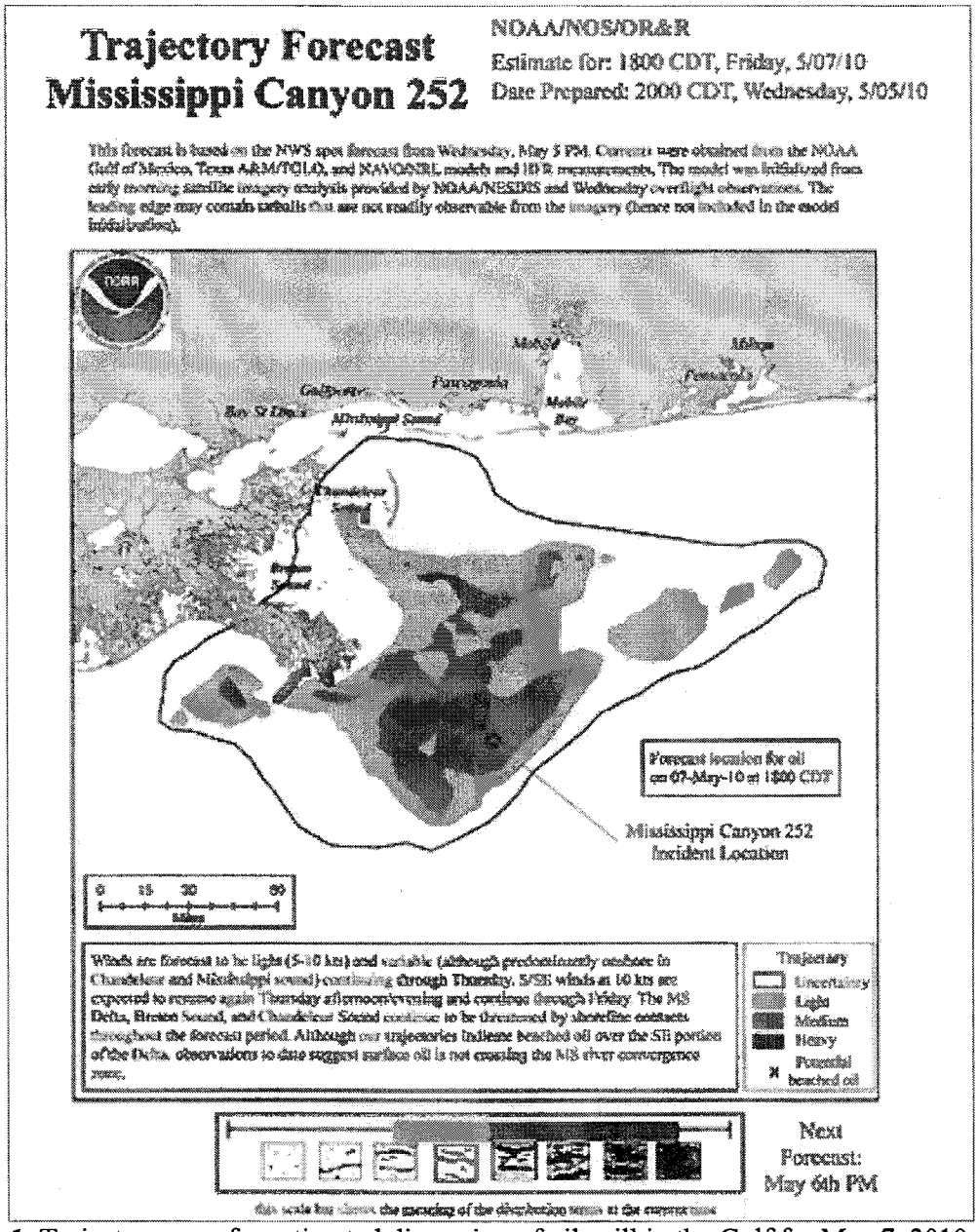

Figure 1. Trajectory map for estimated dispersion of oil spill in the Gulf for May 7, 2010.

The Loop Current in the Gulf causes additional concerns for the dispersion of oil spill throughout the EEZ. The Loop Current is the large flow of warm water that dominates circulation within the eastern Gulf (Figure 2). Part of the Gulf Stream, the Loop Current is a warm ocean current in the Gulf that flows northward between Cuba and the Yucatán peninsula, moves north into the Gulf, loops east and south before exiting to the east through the Florida Straits. The Loop Current flows clockwise and penetrates northward and westward into the Gulf. It can spawn clockwise eddies that carry warm water eastward across the Gulf. The Loop Current may extend across the Mississippi river delta or the Florida continental shelf at westward speeds up to 2-5 km per day.

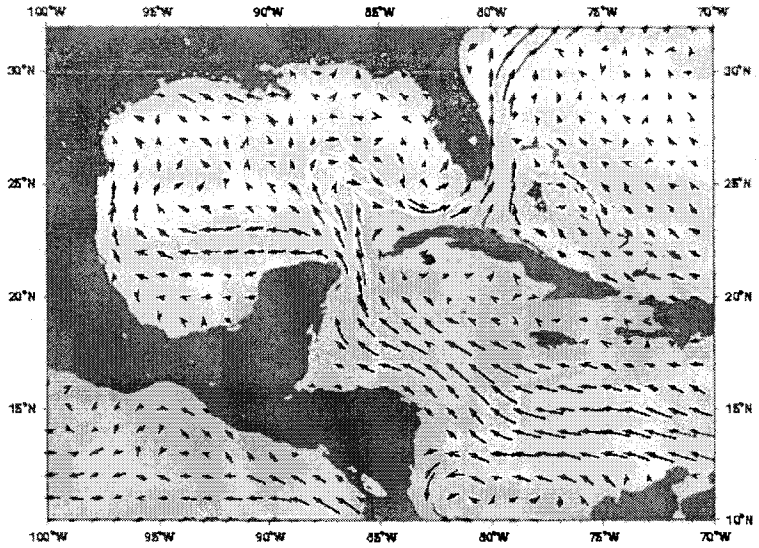

Figure 2. Illustration of the Loop Current in the Gulf of Mexico.
http://oceancurrents.rsmas.miami.edu/atlantic/loop-current.html

2.2 Purpose and Need for Action

Fish and shellfish in oil affected waters may be contaminated with hydrocarbons above baseline levels. The U.S. Food and Drug Administration considers such seafood to be adulterated. The intent of this rule is to prohibit harvest of adulterated seafood while promoting public safety and consumer confidence in seafood products regarding areas of the exclusive economic zone (EEZ) affected by the Deepwater Horizon oil spill. NOAA Fisheries Service (NMFS) is promulgating emergency regulations to prohibit fishing activities in areas within the extent of the oil spill and will modify the spatial and temporal extend of those closed areas, as needed, in response to new information.

Under authority of section 305(c)(3)(c) of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), NMFS can implement emergency regulations that respond to an oil spill and the regulations may remain in effect until the circumstances that created the emergency no longer exist. Under this provision, the public would have an opportunity to comment after the regulation is published.

3.0 MANAGEMENT ALTERNATIVES

Section 1502.14 of the Council on Environmental Quality (CEQ) regulations requires agencies to explore and objectively evaluate all reasonable alternatives for an action, including the no action alternative. The analysis of alternatives shall describe the environment to be affected by the action and the environmental consequences of each of the alternatives (Part 1502.14, CEQ, Accessed on October, 1, 2009). Alternatives shall be presented in comparative form to provide a clear basis for why decision makers selected the preferred alternative(s).

Two alternatives are being considered in this EA. Descriptions of the environmental consequences associated with each alternative can be found in Section 4.0 along with the physical, biological, economic, social, and administrative environments affected by this action.

Action: Restrict fishing activities in the EEZ affected by the Deepwater Horizon oil spill.

Alternative 1 – No Action. Allow status quo fishing activities to continue in the EEZ.

Preferred Alternative 2 –. Restrict fishing activities or harvesting marine resources in portions of the EEZ encompassing the spatial and temporal extent of the oil spill.

In section 4.0, potential impacts for the two alternatives are discussed. **Alternative 1** (no action) which would allow status quo fishing activities to continue in the EEZ regardless of the oil spill. This alternative could endanger the public, fishermen, and oil spill responders.
Preferred Alternative 2 would allow NMFS to restrict fishing activities or harvesting marine resources in portions of the EEZ encompassing the spatial and temporal extent of the oil spill. Due to the currents and winds, the extent of the oil spill will continue to be dynamic throughout the EEZ. NMFS anticipates a potential need to adjust the spatial and temporal extent of the closed area as conditions change to encompass the extent of the oil spill. Based on the trajectory of the extent of dispersion of the oil spill on April 30, 2010, the proposed May 2, and May 7, 2010, closures are presented (Figure 3 and 4).

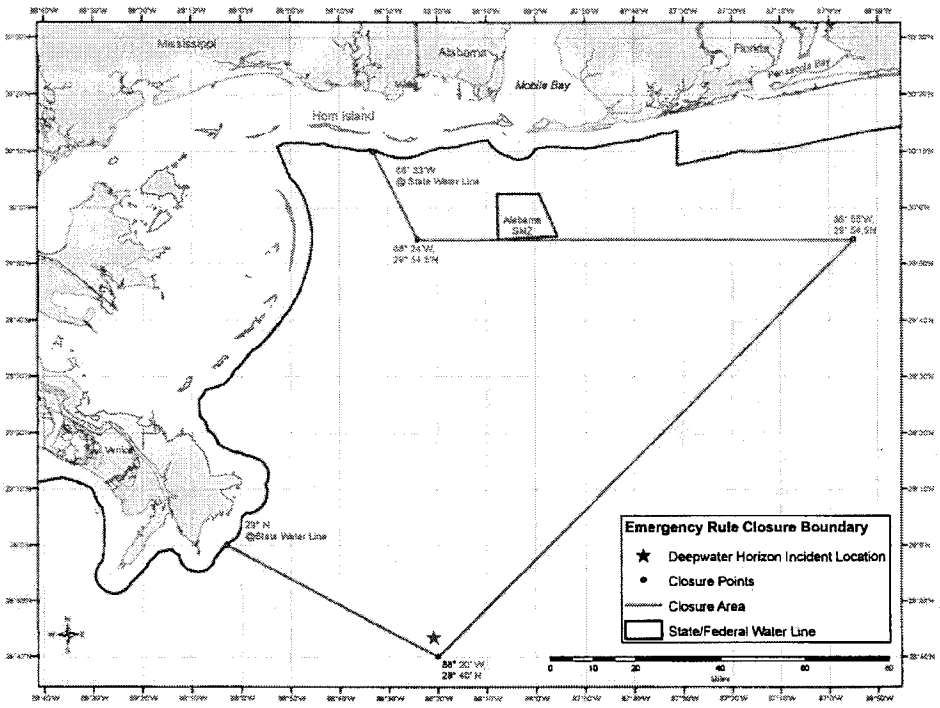

Figure 3. Provides a map of the proposed emergency closure for May 2, 2010, based on the updated trajectory of the dispersion extent of the oil spill.

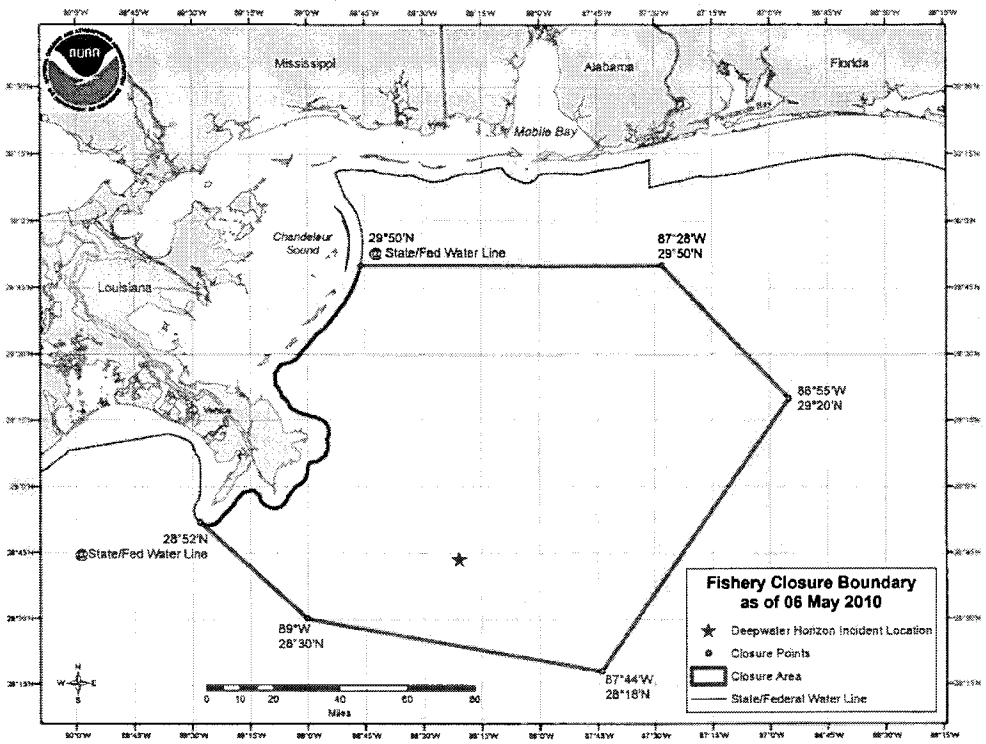

Figure 4. Provides a map of the proposed emergency closure for May 7, 2010, based on the updated trajectory of the dispersion extent of the oil spill.

4.0 AFFECTED ENVIRONMENTS

A brief description of the affected environment is included herein for this EA. More detailed descriptions of the affected environment can be found in the EIS to the Generic Essential Fish Habitat (EFH) Amendment (GMFMC 2004a), Secretarial Amendment 1 to the Reef Fish FMP (NMFS 2004a), and Amendment 1 (EFH) to the Consolidated HMS FMP are incorporated herein by reference. Due to the potential of the oil spill to become entrained in the Loop Current and possible dispersion throughout the geographic extent of the Southeast region, as described in section 1.0, the Gulf, South Atlantic, and U.S. Caribbean (Caribbean) are considered as potentially affected environments.

4.1 Physical Environment

The EEZ in the Southeast Region consists of the Gulf, South Atlantic, and Caribbean. The Gulf is bounded by Cuba, Mexico, and the United States, and has a total area of 564,000 km^2. Continental shelves occupy about 35 percent of the total Gulf. This area is managed by the Gulf of Mexico Fishery Management Council, except for highly migratory species which are managed by the Secretary of Commerce. The Gulf Council federal waters are 9-200 miles off the coast of Texas and Florida, and 3-200 miles off the coast of Louisiana, Mississippi, and Alabama.

The South Atlantic federal waters are from 3-200-mile limit of the Atlantic off the coasts of North Carolina, South Carolina, Georgia, and east Florida to Key West, which is also the South Atlantic Fishery Management Council's area of jurisdiction.

The U.S. Caribbean is located in the eastern extreme of the Caribbean archipelago, about 1,100 miles east-southeast of Miami, Florida. It comprises the Commonwealth of Puerto Rico in the Greater Antilles and the Territory of the US Virgin Islands in the Lesser Antilles island chain, both of which separate the Caribbean Sea from the western central Atlantic Ocean. The USVI are part of the Virgin Islands chain, which lies about 50 mi (80 km) east of Puerto Rico and consist of about 80 islands and cays including St. Croix, St. Thomas, and St. John. The islands of St. Thomas and St. John are bordered by the Atlantic Ocean to the north and the Caribbean Sea to the south. More detailed information on the physical environment can be found in Section 3.1 of the EFH FSEIS (CFMC 2004).

4.2 Biological Environment

The biological environment of the Gulf, including the species addressed in this environmental assessment, is described in detail in the final EIS for the Generic EFH amendment and incorporated here by reference (GMFMC 2004a).

Fisheries

Gulf: The Reef Fish Fishery Management Plan (FMP) currently encompasses 42 species. Stock assessments have been conducted on 11 species: red snapper, vermilion snapper, yellowtail snapper, gray triggerfish, greater amberjack, hogfish, red grouper, gag, yellowedge grouper, and goliath grouper. A detailed description of the fisheries can be found on the Council (www.gulfcouncil.org) and SEDAR (www.sefsc.noaa.gov/sedar) Websites.

The Gulf shrimp fishery targets brown, white, pink, and royal red shrimp. Incidental catch in the fishery includes seabobs and rock shrimp. The final Environmental Impact Statement (EIS) for the original Shrimp FMP and the FMP as revised in 1981 contain a description of the Gulf shrimp fishery. Shrimp Amendment 9 (GMFMC 1997) which included an SEIS, updated this information.

The stone crab fishery of the Gulf mainly occurs in state waters during the October through May season. A detailed description of the fisheries can be found on the Council Web site (www.gulfcouncil.org)

The spiny lobster fishery of the Gulf and South Atlantic includes five species of lobsters; however, only the Caribbean spiny lobster and the ridged slipper lobster have management measures associated with them. The fishery is prosecuted primarily in Monroe County, Florida, where 90 percent of all landings occur. A detailed description of the fisheries can be found on the Council Web site (www.gulfcouncil.org)

The coastal migratories fishery of the Gulf and South Atlantic includes Spanish mackerel and king mackerel. A detailed description of the fisheries can be found on the Council Web site (www.gulfcouncil.org)

South Atlantic: Fishery Management Plans in the South Atlantic include Snapper-Grouper, Coastal Migratory Pelagics, Coral, Golden Crab, Dolphin Wahoo, Sargassum, Shrimp, and Spiny Lobster. The stock assessments, FMPs, and Amendments can be found on the South Atlantic Council (www.southatlanticcouncil.org) and SEDAR (www.sefsc.noaa.gov/sedar) Web sites.

Caribbean: At present, over 137 reef fish species comprise the total Fishery Management Unit in the Caribbean. Of the 137 species, 55 species are associated with the aquarium trade leaving 82 reef fish species subject to management by the Council. In addition, the Caribbean conch resource is composed of 13 species of gastropods within the families Strombidae, Cymatiidae, Cassidae, Turbinellidae, Fasciolariidae, and Trochidae. Brief descriptions of these species can be found in the Comprehensive SFA Amendment (CFMC 2005) and are available on the NMFS Southeast Region web site http://sero.nmfs.noaa.gov/.

Protected Resources

Gulf and Caribbean: There are 28 species of marine mammals that may occur in the Gulf. All 28 species are protected under the Marine Mammal Protection Act (MMPA) and six are also listed as endangered under the Endangered Species Act (i.e., sperm, sei, fin, blue, humpback, and North Atlantic right whales). Other species protected under the ESA occurring in the Gulf include five sea turtle species (Kemp's Ridley, loggerhead, green, leatherback, and hawksbill); two fish species (Gulf sturgeon and smalltooth sawfish), and two *Acropora* coral species (elkhorn [*Acropora palmata*] and staghorn [*A. cervicornis*]). Information on the distribution, biology, and abundance of these protected species in the Gulf is included in final EIS to the Council's Generic EFH amendment (GMFMC, 2004a), the February 2005 Biological Opinion (BiOp) on the reef fish fishery (NMFS 2005) and *Acropora* Status Review (*Acropora* Biological Review Team 2005). Marine Mammal Stock Assessment Reports and additional information are also available on the NMFS Office of Protected Species Web site: http://www.nmfs.noaa.gov/pr/species/.

South Atlantic: There are 31 different species of marine mammals that may occur in the EEZ of the South Atlantic region. All 31 species are protected under the MMPA and six are also listed as endangered under the ESA (i.e., sperm, sei, fin, blue, humpback, and North Atlantic right whales). Other species protected under the ESA occurring in the South Atlantic include five species of sea turtle (green, hawksbill, Kemp's ridley, leatherback, and loggerhead); the smalltooth sawfish; and two *Acropora* coral species (elkhorn [*Acropora palmata*] and staghorn [*A. cervicornis*]). Designated critical habitat for the *Acropora* corals also occurs within the South Atlantic region. Marine Mammal Stock Assessment Reports and additional information are also available on the NMFS Office of Protected Species Web site: http://www.nmfs.noaa.gov/pr/species/.

Highly Migratory Species

Atlantic Highly Migratory Species (HMS), including tunas, swordfish, sharks, and billfish, are managed throughout the U.S. EEZ in the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea.by the NMFS under the dual authority of the Magnuson-Stevens Act and the Atlantic Tunas Convention Act with consideration for the domestic and international aspects of these fisheries. As their name implies, HMS move through large areas of marine habitats and across domestic and international jurisdictions utilizing various habitats during their different life stages. Additional information about Atlantic HMS fisheries and their management may be found at http://www.nmfs.noaa.gov/sfa/hms/.

4.3 Administrative Environment

Federal fishery management is conducted under the authority of the Magnuson-Stevens Act (16 U.S.C. 1801 et seq.), originally enacted in 1976 as the Fishery Conservation and Management Act. The Magnuson-Stevens Act claims sovereign rights and exclusive fishery management

authority over most fishery resources within the EEZ, an area extending 200 nautical miles from the seaward boundary of each of the coastal states, and authority over U.S. anadromous species and continental shelf resources that occur beyond the EEZ.

Responsibility for federal fishery management decision-making is divided between the Secretary of Commerce (Secretary) and eight regional fishery management councils that represent the expertise and interests of constituent states. Regional councils are responsible for preparing, monitoring, and revising management plans for fisheries needing management within their jurisdiction. The Secretary is responsible for promulgating regulations to implement proposed plans and amendments after ensuring management measures are consistent with the Magnuson-Stevens Act and with other applicable laws summarized in Section 6. In most cases, the Secretary has delegated this authority to NMFS. The Secretary is directly responsible for management of Atlantic HMS and has also delegated this authority to NMFS.

The Gulf Council consists of voting public members appointed by the Secretary; one each from the fishery agencies of Texas, Louisiana, Mississippi, Alabama, and Florida; and one from NMFS. The public is also involved in the fishery management process through participation on advisory panels and through publically open council meetings, with some exceptions for discussing internal administrative matters. The regulatory process is also in accordance with the Administrative Procedures Act, in the form of "notice and comment" rulemaking, which provides extensive opportunity for public scrutiny and comment, and requires consideration of and response to those comments.

Regulations contained within FMPs are enforced through actions of the NOAA's Office of Law Enforcement, the United States Coast Guard (USCG), and various state authorities. To better coordinate enforcement activities, federal and state enforcement agencies have developed cooperative agreements to enforce the Magnuson-Stevens Act.

One reason for state representation at the council level is to ensure state participation in federal fishery management decision-making and to promote the development of compatible regulations in state and federal waters. The state governments of Texas, Louisiana, Mississippi, Alabama, and Florida have the authority to manage their respective state fisheries. Each of the five Gulf states exercises legislative and regulatory authority over their states' natural resources through discrete administrative units. Although each agency is the primary administrative body with respect to the states natural resources, all states cooperate with numerous state and federal regulatory agencies when managing marine resources. A more detailed description of each state's primary regulatory agency for marine resources is provided in Amendment 22 to the Reef Fish FMP (GMFMC 2004a).

4.4 Human Environment

Descriptions of the human environment in the Gulf and South Atlantic can be found at (http://sero.nmfs.noaa.gov/sf/socialsci/socialsci.htm), while descriptions of the human environment in the Caribbean can be found at (www.sefsc.noaa.gov/socialscience_memo.jsp).

Descriptions of the commercial and recreational fisheries for federally managed species can be found on at (www.gulfcouncil.org) for Gulf species, (www.southatlanticcouncil.org) for South Atlantic species, and (http://sero.nmfs.noaa.gov/) for Caribbean species, and (http://www.nmfs.noaa.gov/sfa/hms) for highly migratory species.. Finally, economic data for all marine fisheries in the U.S., including those that occur in both EEZ and state waters, can be found at (www.st.nmfs.noaa.gov/st5/publication/fisheries_economics_2008.html).

5.0 ENVIRONMENTAL CONSEQUENCES

This section provides a comparison of the alternatives described in Section 3.0. The direct, indirect, and cumulative effects on the physical, biological, social, economic, and administrative environments for each management alternative are described below. This section also describes: 1) Any unavoidable adverse effects resulting from the proposed action, 2) the relationship between short-term uses of man's environment and long-term productivity, and 3) any irreversible or irretrievable commitments of resources resulting from implementation of the proposed action.

CEQ regulations (40 CFR 1508.8) define direct effects as those "which are caused by the action and occur at the same time and place." Indirect effects are defined as those "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." Cumulative effects are defined as "impacts on the environment that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such actions."

Actual implementation of the restriction would be through a series of point-to-point lines. The maps and coordinates for the revised closures would be provided on the NMFS Southeast Region Web site (http://sero.nmfs.noaa.gov/) as needed. Information would be provided to the public through the distribution of fishery bulletins and announcements on the marine radio and Vessel Monitoring System. Due to the currents and winds, the extent of the oil spill will continue to be dynamic throughout the EEZ. NMFS anticipates a potential need to adjust the spatial and temporal extent of the closed area as conditions change to encompass the extent of the oil spill.

Transit of vessels through closed areas will not be impacted by the proposed action.

5.1 Impacts on the Physical Environment

The oil spill event itself is expected to lead to significant impacts on EFH, but the proposed action to prohibit fishing in areas affected by the oil spill are not expected to exacerbate the situation. The area to be closed is designated as EFH for several managed species. **Alternative 1** would have no significant adverse effect on the EFH different than those effects already analyzed in previous EAs and EISs for FMPs and FMP amendments in the GOM. **Preferred Alternative 2,** is not reasonably expected to cause substantial damage to the ocean and coastal habitats and/or EFH. Area closures will be adjusted to reflect past, present, and projected future areas affected by the oil spill, and would reduce or eliminate all fishing mortality on all marine fish stocks within the changing boundaries of the closed area. In addition, this will ensure fishermen do not enter areas where oil was present, but is no longer detectable. Reductions in fishing effort can be expected to provide a positive benefit to habitats within any designated closed area by eliminating the impacts of fishing gear, anchoring, or other activities that would impact the benthic or water column habitats during the closed period.

In regard to ecologically critical areas, should closures be required further east and south of the current closure, the Tortugas Marine Sanctuary already is closed to fishing, as are Madison

Swanson, Steamboat Lumps, and the Edges ecologically critical areas closed to bottom fishing, and the Desoto Canyon area is closed to pelagic longling. Should future closures be needed to the west of the current spill area, fishing is already prohibited in the Flower Gardens National Marine Sanctuary, and in other EFH areas to the west, including but not limited to, areas such as Stetson Reef. Therefore, there would be no additional impacts on these components of the environment from the proposed action.

5.2 Impacts on the Biological Environment

Although the biological environment may be greatly impacted by the oil spill in the EEZ, NMFS' proposed action should not adversely affect the resource. **Alternative 1** would continue fishing activities as per status quo and would not significantly affect the target or non-target species, biodiversity, ecosystem function, or protected resources differently from those effects previously analyzed in the EAs and EISs prepared for FMPs and FMP amendments in the GOM. **Preferred Alternative 2** would restrict fishing activities and harvest of marine resource in areas encompassing the spatial extent of the oil spill. The purpose of NMFS' proposed action is to refrain from fishing until conditions are safe to resume fishing. **Preferred Alternative 2** cannot be reasonably expected to jeopardize the sustainability of any target or non-target stocks. Area closures will be adjusted to reflect the spatial and temporal areas affected by the oil spill, and would reduce or eliminate all fishing mortality on all marine resources within the closed area. The closed areas may cause a geographic shift in fishing effort and associated impacts; however, because fishing effort is controlled under FMPs in the area and effort is greatly reduced due to the spill, it is not anticipated to cause significant effects on the biological environment. Although the fishing pressure may increase in other areas, the species are managed under regulations such as catch shares, quotas, and seasonal closures which restrict the total catch.

Preferred Alternative 2 is not expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area. Reductions in fishing effort from the proposed prohibitions for fishing in the closed areas can be expected to provide a positive benefit to biodiversity and ecosystem function within any designated closed area by eliminating the impacts of fishing gear, anchoring, or other activities that would impact biodiversity or ecosystem function. In addition, **Preferred Alternative 2** is not expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species. The action may indirectly benefit protected species by reducing the number of vessels in the closed area, thus reducing the potential for ship strikes or incidental takes.

5.3 Impacts on the Economic, Social, and Human Environments

Although the economic and social environments may be greatly impacted by the oil spill in the EEZ, NMFS' proposed action is not reasonably expected to create any substantially adverse affects. **Alternative 1** would continue fishing activities as per status quo and would not significantly affect the economic environment, social environment, human environment, or public safety different from those effects previously analyzed in the Environmental Assessments (EA) and EISs prepared for FMPs and plan amendments within the Gulf of Mexico.

Preferred Alternative 2 would restrict fishing activities and harvest of marine resource in areas encompassing the spatial extent of the oil spill. This alternative would not create any significant social or economic impacts interrelated with natural or physical environmental effects. Restricting fishing for and harvesting marine resources within the closed area affected by the Deepwater Horizon oil spill may have direct and indirect social and economic impacts to the segment of the fisheries operating in the closed areas and the associated shoreside operations that support these fisheries. However, due the presence of oil in the closed area, fishing and harvesting of marine resources is not expected to occur in areas within the extent of the oil spill whether the area is closed or not, thus prohibiting this activity is not expected to alter the manner in which the fisheries would be conducted during this event. Areas may be closed due to the projected movement of oil. To minimize the social and economic impacts, the areas closed by projections for which the projections prove incorrect may be reopened. This alternative is not reasonably expected to have a substantial adverse impact on the public safety or health. Area closures encompassing the spatial and temporal extent of the oil spill may promote safety for the public, fishermen, and marine response personnel by avoiding potential dangers in these areas. The effects on the quality of the human environment are not likely to be highly controversial. Due to the presence of oil in the areas considered in **Preferred Alternative 2**, fishing and harvesting of marine resources is not expected to occur in areas where oil is present whether the area is closed or not, thus prohibiting this activity is not expected to alter the manner in which the fisheries would be conducted. Additionally, the effects on the human environment are not likely to be highly uncertain or involve unique or unknown risks. NMFS regularly closes fisheries in specific areas when area-specific quotas are met (e.g. king mackerel zones in the Gulf of Mexico), or closes areas in accordance with regulations from various fishery management plan actions (e.g., Texas Shrimp Closure). Closing areas to fishing does not preclude fishermen from shifting their fishing efforts to areas that are open.

A list of commercial and recreational fisheries for the Gulf of Mexico (Section 10.0) provides additional information on the potentially affected fisheries.

5.4 Cumulative Effect Analysis (CEA)

As directed by National Environmental Policy Act (NEPA), federal agencies are mandated to assess not only the indirect and direct impacts, but cumulative impacts of actions as well. NEPA defines a cumulative impact as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 C.F.R. 1508.7). Cumulative effects can either be additive or synergistic. A synergistic effect is when the combined effects are greater than the sum of the individual effects. Detailed CEAs for the reef fish fishery have been conducted in recent amendments to the FMP (Amendments 27, 29, 30A, 30B, and 31) and are incorporated here by reference. These CEAs evaluated the immediate areas affected by the actions and includes the federal waters of the Gulf.

The proposed action is not related to other actions with individually insignificant but cumulatively significant impacts. In general, this action will eliminate fishing mortality on these marine resources in the affected area, and should reduce the potential for interactions with protected resources. The proposed action is temporary, with closed areas being adjusted according to past, present, and future projections of areas affected by the oil spill. In addition, this will ensure fishermen do not enter areas where oil was present, but is no longer detectable. NMFS' proposed action is not anticipated to have significant direct, indirect, or cumulative effects on the biological, physical and administrative environment. To the extent that future closures, longer-term fisheries management actions, and restoration decisions are made, NMFS will conduct future environmental reviews and consider the oil spill within the environmental context of the effects of a proposed action and alternatives. The oil spill event itself is expected to lead to cumulatively significant impacts on the physical, biological, and human environment, but the proposed action to prohibit fishing in areas affected by the oil spill is not expected to exacerbate the situation. However, if the Loop Current entrains the oil, it may cause extensive dispersion of the oil spill throughout the EEZ and, in turn, additional direct, indirect, and cumulative effects. Living marine resources that come into contact with the oil spill are likely to have increased levels of polcyclic aromatic hydrocarbons. The Food and Drug Administration has determined that these living resources are "adulterated seafood" and thus should not be harvested until properly tested and cleared.

7.0 REFERENCES

CEQ (Council on Environmental Quality). Accessed on October 1, 2009.
Website – http://www.nepa.gov/nepa/regs/ceq/toc_ceq.htm
Home page – http://www.nepa.gov/nepa/nepanet.htm

EPA (Environmental Protection Agency). www.epa.gov/climatechange/index.html.

Gyory, J., Mariano, A. J., Ryan, E. H. "The Loop Current." Ocean Surface Currents. (accessed May 4, 2010). http://oceancurrents.rsmas.miami.edu/atlantic/loop-current.html.

GMFMC. 1981. Fishery management plan for the reef fish fishery of the Gulf of Mexico and environmental impact statement. Gulf of Mexico Fishery Management Council, Tampa, Florida.

GMFMC. 1989. Amendment 1 to the reef fish fishery management plan. Gulf of Mexico Fishery Management Council, Tampa, Florida. 356 p.

GMFMC. 1998. Generic Amendment for Addressing Essential Fish Habitat Requirements in the following Fishery Management Plans of the Gulf of Mexico: Shrimp Fishery of the Gulf of Mexico, United States Waters, Red Drum Fishery of the Gulf of Mexico, Reef Fish Fishery of the Gulf of Mexico, Coastal Migratory Pelagic Resources (Mackerels) in the Gulf of Mexico and South Atlantic Stone Crab Fishery of the Gulf of Mexico, Spiny Lobster in the Gulf of Mexico and South Atlantic, Coral and Coral Reefs of the Gulf of Mexico. (Includes Environmental Assessment)

GMFMC. 2004a. Final Environmental Impact Statement for the Generic Essential Fish Habitat Amendment to the following fishery management plans of the Gulf of Mexico: Shrimp Fishery of the Gulf of Mexico, Red Drum Fishery of the Gulf of Mexico, Reef Fish Fishery of the Gulf of Mexico, Stone Crab Fishery of the Gulf of Mexico, Coral and Coral Reef Fishery of the Gulf of Mexico, Spiny Lobster Fishery of the Gulf of Mexico and South Atlantic, Coastal Migratory Pelagic Resources of the Gulf of Mexico and South Atlantic. Gulf of Mexico Fishery Management Council, Tampa, Florida. 118 p.

GMFMC. 2005a. Generic Amendment 3 for addressing EFH requirements, HAPCs , and adverse effects of fishing in the following FMPs of the Gulf of Mexico: Shrimp, Red Drum, Reef Fish, Stone Crab, Coral and Coral Reefs in the GOM and Spiny Lobster and the Coastal Migratory Pelagic resources of the GOM and South Atlantic. Gulf of Mexico Fishery Management Council, Tampa, Florida.

GMFMC. 2005b. Amendment 25 to the FMPs for: Reef Fish and Coastal Migratory Pelagics Amendment 17 for Extending the Charter Vessel/Headboat Permit Moratorium (Including SEIS/RIR/IRFA) Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, Florida 33607. 79 pp with appendices

GMFMC. 2007. Amendment 27 to the Reef Fish FMP and Amendment 14 to the Shrimp FMP to end overfishing and rebuild the red snapper stock. Gulf of Mexico Fishery Management Council, 2203 North Lois Avenue, Suite 1100, Tampa, Florida 33607. 490 pp with appendices.

NMFS. 2006b. Final Consolidated Atlantic Highly Migratory Species Fishery Management Plan. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD. Public Document. Pp. 1600

NMFS. 2007. Fisheries of the United States 2006. NMFS, Silver Spring, MD. 104 p. Status of US Fisheries. Accessed on October 1, 2009. http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm

NMFS. 2009. Final Consolidated Atlantic Highly Migratory Species Fishery Management Plan. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD. Public Document.

8.0 LIST OF PREPARERS

Name	Expertise	Responsibilities	Agency
Dr. Steve Branstetter	Biologist	FONSI/Review	SERO
Mr. David Keys, CEP	Regional NEPA Coordinator	NEPA Strategy and overall Review	SERO
Ms. Cynthia Meyer	Biologist/GISP	Actions and Alternatives, GIS maps, and Review	SERO
Dr. Stephen Holiman	Socioeconomic Impacts	Human Environment	SERO
Ms. Amanda Frick	GIS	Maps	SERO

9.0 LIST OF AGENCIES CONSULTED

NOAA Southeast Fishery Science Center

NOAA SERO Protected Resources Division

NOAA SER General Counsel

NOAA HMS Management Division

10.0 LIST OF FISHERY REGULATIONS

Gulf of Mexico

Federal Regulatory Season/Area Closure Information

Commercial Fisheries

- Shellfish (spiny lobster CLOSED; all other OPEN)
  - Stone crab closed May 16 through October 14
  - Spiny lobster closed April 1 through August 5
  - Penaeid shrimp (white, pink, brown shrimp) open year-round, except for waters off Texas, which are closed May 15 until (usually) July 15
  - Royal red shrimp open, but subject to quota (quota has never been met)
- Reef Fish (Greater amberjack, goliath grouper, and Nassau grouper CLOSED; all other OPEN)
  - Open year round- Grouper, Snapper, Tilefish
  - Greater amberjack closed March through May; also subject to quota closure
  - Gray triggerfish open year-round, but subject to quota closure
  - Goliath and Nassau grouper closed year-round
    - Madison-Swanson & Steamboat Lumps areas are closed to all fishing from November through April; surface trolling is allowed from May through October.
    - The Edges 40 Fathom Contour is closed to all fishing from January through April.
- Coastal migratory pelagic species (King mackerel CLOSED; all other OPEN)
  - Cobia open year-round
  - King mackerel subject to quota; western zone (TX-AL) and most eastern zone (AL-FL) CLOSED until July 1

- Spanish mackerel open year-round; subject to quota closure
- Highly Migratory Species (non-sandbar large coastal sharks and small coastal sharks CLOSED; all other OPEN)
  - Tuna fishery open year-round for all species (bluefin, bigeye, albacore, yellowfin, skipjack), but subject to quota closure for bluefin tuna. Targeting of bluefin tuna is prohibited in Gulf of Mexico.
  - Swordfish currently open, but subject to quota
  - Sharks
    - Non-sandbar large coastal sharks open year-round, but subject to quota (currently closed until December 31)
    - Small coastal sharks open year-round, but subject to quota (currently closed until further notice)
    - Many other species of sharks are prohibited
  - Commercial fishing for billfish (blue marlin, white marlin, sailfish, longbill spearfish) prohibited year-round
  - Area closures applicable to all HMS fishing:
    - DeSoto Canyon closed year-round to pelagic longline gear only
    - Madison-Swanson & Steamboat Lumps closed year-round, except that surface trolling is allowed from May through October
    - The Edges 40 Fathom Contour closed from January through April

Recreational

- Shellfish (spiny lobster CLOSED; stone crab OPEN)
  - Stone crab closed May 16 through October 14
  - Spiny lobster closed April 1 through August 5
- Reef Fish (red snapper, goliath grouper, and Nassau grouper CLOSED; all other OPEN)
  - Grouper
    - Shallow-water grouper closed February through March
    - Deep-water grouper open year-round
    - Goliath and Nassau grouper closed year-round
  - Snapper
    - Red snapper currently closed; scheduled to open June 1 and close July 23 through May 2011
    - Other snapper and Tilefish open year-round
  - Greater amberjack and Gray triggerfish open year-round; subject to quota closure
- Coastal migratory pelagic species (OPEN)
  - Cobia, King mackerel, and Spanish mackeral open year-round
- Highly Migratory Species (OPEN with exception of prohibited species)
  - Tunas
    - Targeted fishing for bluefin tuna is prohibited, but one trophy fish per year is allowed
    - All other tuna species (bigeye, albacore, yellowfin, & skipjack) are open year-round
  - Select shark species open year-round; others prohibited year-round
  - Swordfish open year-round
  - Select billfish species (blue marlin, white marlin, sailfish) open year-round; others (longbill spearfish) prohibited year-round
  - Area closures applicable to all HMS fishing:
    - Madison-Swanson & Steamboat Lumps closed to all fishing year-round, except that surface trolling is allowed from May through October
    - The Edges 40 Fathom Contour closed to all fishing from January through April