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DIVISION OF MARINE FISHERIES
STATEMENT ON POTENTIAL IMPACTS OF GULF OF MEXICO OIL SPILL ON MASSACHUSETTS FISHERIES
May 14, 2010 updated June 16, 2010

Background
On April 20, 2010, the Deepwater Horizon drilling rig lost pressure control of an exploratory oil well causing a blowout of the well. The blowout led to the rig sinking and an uncontrolled release of natural gas and crude oil.

Will this affect Massachusetts fisheries ecologically?
Unlikely. Several large pelagic fish species found in New England have ranges that extend to the Gulf of Mexico. Among these species, Atlantic bluefin tuna (*Thunnus thynnus*) support both commercial and recreational fisheries in Massachusetts. The Gulf is the main known spawning area for bluefin tuna in the western Atlantic and their peak spawning period in the Gulf of Mexico region is from April to May. Survival of tuna larvae could be impacted by the spill, affecting future year classes. The recreational fishery largely targets fish that are at least 2 years old while commercially landed fish are at least 7 years old. NOAA research vessel Gordon Gunter and researchers from the University of Southern Mississippi Gulf Coast Research Laboratory were surveying bluefin tuna eggs and larvae prior to and at the time of the spill. Two other species found in New England waters in summer and fall, the ocean sunfish (*Mola mola*) and shortfin mako shark (*Isurus oxyrinchus*), also range as far south as the Gulf of Mexico and could be impacted by the spill through direct contact or ingestion of contaminated prey.

Several sea turtle species that are seasonal migrants to New England waters are also found in the Gulf. The leatherback turtle (*Dermochelys coriacea*), which travels to New England waters during summer and fall to forage on gelatinous zooplankton, also feeds in the

Gulf. Leatherbacks could be impacted by the spill as a result of direct contact, reduced food availability, or ingestion of contaminated diet items. Several turtle species that are found along the New England coast in late fall and early winter during "cold-stunning" events also inhabit the Gulf of Mexico. The Kemp's ridley sea turtle (*Lepidochelys kempii*) is the most common "cold-stunned" species in New England, but the most endangered species worldwide. The only known nesting beaches for this species are found in the western Gulf of Mexico. Nesting occurs from April to June and both adults and hatchlings could be adversely impacted by the spill. Loggerhead (*Caretta caretta*) and green sea turtles (*Chelonia mydas*) also cold-stun in New England and occupy Gulf forage grounds, where they are susceptible to similar negative impacts.

If oil gets caught in the Gulf of Mexico Loop Current which connects with the Gulf Stream, there is a small chance that some weathered oil products will be transported to southern New England via the Gulf Stream. The Gulf Stream diverges from the U.S. East Coast at Cape Hatteras, North Carolina, making direct impacts to New England waters less likely. The primary transport mechanism would be eddies that spin off from the Gulf Stream. These same eddies transport tropical fish into New England waters. While the eddies could transport oil to New England, it is unlikely that these oil products will have any measurable biological impact since they will be considerably weathered since this transport would take many weeks or even months. We anticipate that shoreline exposure to oil from the Gulf of Mexico spill will be similar to current exposures from normal vessel traffic, weathering of previous spills in New England waters, and natural sources of oil. To date, the oil has been trapped in a clockwise current in the Gulf of Mexico and has not started traveling to southern Florida or into the Gulf Stream although little is known about the transport of subsurface oil.

Will this affect Massachusetts fisheries economically?
Unlikely. Among the largest fisheries resources in the Gulf are brown shrimp (*Penaeus aztecus*), oyster (*Crassostrea virginica*), and red snapper (*Lutjanus campechanus*). There are possible, though unlikely, effects of the spill on related Massachusetts fisheries. Extended shellfish closures in the large oyster beds in Louisiana are expected, and prices for oysters have risen in response. Currently, other Gulf States and the Chesapeake are absorbing the market demand. Similarly, shrimp production may be affected. However, due to the different market segments for northern and southern shrimp, this is unlikely to affect the northern shrimp industry. Since only a portion of the Gulf is currently closed for fishing, it is unlikely that there will be any shift in market share at our current level of understanding. There is also a possibility that some fishing-based tourism will move further north in response to the spill. Different life stages of the bluefin tuna population in the Gulf are being studied more thoroughly to examine potential impact to future year classes.

Can I eat fish from the Gulf of Mexico?
Yes. NOAA and the Gulf states have extensive seafood safety programs that were in place prior to the spill. The federal government has expanded the amount of sampling being done throughout the entire Gulf of Mexico. The oil spill area is being constantly monitored and the spill area has been closed to harvest to protect the safety of the public. 68% of Gulf of Mexico federal waters remain open to fishing.

What is the Division of Marine Fisheries doing?
To support our colleagues in the Gulf States, several *MarineFisheries* staff have signed up to professional volunteer service lists offering expertise in the review of data and documentation.

MarineFisheries staff is keeping a close watch on the situation by following the Unified Command website for the oil spill (http://www.deepwaterhorizonresponse.com/go/site/2931/) and other web portals with updates on the spill (see links below). The *MarineFisheries* shellfish program has staff trained to respond to oil spills and follows existing state and federal contingency plans to respond to spills of any hazardous materials. *MarineFisheries* conducts several monitoring programs, including lobster, resource assessment, sportfish, and shellfish surveys. These programs will be looking for evidence of oil during surveys if the oil starts traveling up the Gulf Stream.

What if there is an oil spill in Massachusetts?
If you have knowledge of a release of oil or hazardous materials to the environment, please notify your local fire department and the Emergency Response section at MassDEP at 1-888-304-1133. If you would like more information about how Massachusetts state agencies respond in the event of a local oil spill please see the Massachusetts Oil Spill Contingency plan (http://www.mass.gov/dep/cleanup/laws/regulati.htm).

Links
The Official Site of the Deepwater Horizon Unified Command
http://www.deepwaterhorizonresponse.com/go/site/2931/

NOAA Office of Response and Restoration
http://deepwaterhorizon.noaa.gov
http://www.incidentnews.gov/incident/8220

NOAA NMFS: Deepwater Horizon/BP Oil Spill: Federal Fisheries Closure and Other Information
http://sero.nmfs.noaa.gov/deepwater_horizon_oil_spill.htm

EPA Response to BP Oil Spill
http://www.epa.gov/bpspill/

Gulf of Mexico SeaGrant Oil Spill website
http://gulfseagrant.tamu.edu/oilspill/index.htm

NOAA Environmental Response Management Application
http://www.geoplatform.gov/gulfresponse/

BP Oil Spill Response
http://www.BP.com/GulfOfMexicoResponse

NY Times Oil Spill portal
http://www.nytimes.com/interactive/2010/05/27/us/20100527-oil-landfall.html

Massachusetts Oil Spill Contingency plan http://www.mass.gov/dep/cleanup/laws/regulati.htm

NERACOOS Fact Sheet

http://www.neracoos.org/plone/documents/NERACOOS_Deepwater_horizon_6-14-2010.pdf/view