

The 2010 BP Oil Disaster

Pacific States Marine Fisheries Commission

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Oil Spill

On April 20, 2010, the Deepwater Horizon, an oil drilling rig, exploded. The drilling rig was located approximately 50 miles southeast of the Mississippi River in the Gulf of Mexico. The explosion and subsequent sinking of the rig caused oil to begin leaking from the well at the rate of 5,000 to 60,000 barrels a day causing an unknown impact on fish, crustaceans, marine mammals, sea turtles, birds, and the entire Gulf of Mexico ecosystem.



Courtesy USCG

▶ Play



April 22

A Deepwater Horizon oil rig sinks two days after an explosion.

Estimate of oil spilled into the Gulf through April 22

In millions of barrels of oil.



lxtoc l
3.3

Exxon Valdez
0.3



Map Key

- Estimated extent of oil on surface
- Fishing ban
- Marshes
- Reports from locations where oil has made landfall
- Surveyed extent
- Loop current
- Urban areas
- For updates, follow us on Twitter @nytoilspillmap.

Wildlife Impacts

Sea Turtles (n=1,033)

Live		Dead		Pending
Visibly Oiled	Not Visibly Oiled	Visibly Oiled	Not Visibly Oiled	
444	63	17	82	424

Dolphins (n=76)

Live		Dead		Pending
Visibly Oiled	Not Visibly Oiled	Visibly Oiled	Not Visibly Oiled	
1	4	4	64	3

Birds (n=6,104)

Live		Dead		Pending
Visibly Oiled	Not Visibly Oiled	Visibly Oiled	Not Visibly Oiled	
1,917	0	1,872	2,301	14

Florida



June 2, 2010 – Governor Charlie Crist requests a fishery failure determination for Florida from the United States Department of Commerce.

June 2, 2010 – U.S. Commerce Secretary Gary Locke includes Florida in the fishery disaster declaration for the Gulf of Mexico.

June 14, 2010 – A 23 mile long stretch of state waters off Escambia County closed to all fishing.

July 2, 2010 – A group of sea turtle experts from USFWS, NMFS, and FWC decide to move sea turtle eggs that are within a week of hatching from beaches in Northwest Florida to a facility on the central-east coast of Florida. Two hundred thirty-one nests were moved in late July.

July 31, 2010 – State waters reopened to saltwater fishing.

Alabama

May 18, 2010 – Alabama requests a federal fisheries disaster declaration.

May 24, 2010 – U.S. Commerce Secretary Gary Locke determined a fishery disaster in the Gulf of Mexico due to the Deepwater Horizon oil spill.

June 10, 2010 – State waters and Mississippi Sound closed to all saltwater fishing.

June 24, 2010 – Closed areas open to catch and release fishing only.

August 8, 2010 – All state waters open to commercial and recreational fishing except for oysters and crabs.

Mississippi



May 13, 2010 – Mississippi requests a federal fisheries disaster declaration.

May 24, 2010 – U.S. Commerce Secretary Gary Locke determined a fishery disaster in the Gulf of Mexico due to the Deepwater Horizon oil spill.

June 1, 2010 – Portions of state waters closed to all saltwater fishing.

July 1, 2010 – All state waters closed to saltwater fishing.

July 19, 2010 – State waters opened to catch and release fishing.

July 30, 2010 – Portions of state water reopened to fishing.

August 6, 2010 – All state waters open to commercial and recreational fishing except for oysters and crabs.

Louisiana

- April 29, 2010 – Governor Jindal requests a commercial fisheries failure in Louisiana.
- April 30, 2010 – Louisiana closes portions of state waters to fishing and oyster harvesting.
- April 25 to May 7, 2010 – Louisiana opens six freshwater diversion structures along the lower Mississippi River to try to prevent oil from penetrating into sensitive coastal wetlands. The combined flow of the diversions is 18,900 cfs entering coastal wetlands.
- May 24, 2010 – U.S. Commerce Secretary Gary Locke determined a fishery disaster in the Gulf of Mexico due to the Deepwater Horizon oil spill.
- June – July, 2010 – Portions of state waters are opened and closed as oil impacts Louisiana's estuaries.
- July 17, 2010 – Reports of 60% mortality on oyster reefs due to freshwater diversions.

Oil Spill

The oil slick produced by the Deepwater Horizon oil spill covered as much 28,958 square miles.

The team of scientists and engineers stated that the daily flow rate decreased over the 87 days prior to the well's closure, beginning at about 62,000 barrels of oil per day and declining to 53,000 barrels of oil per day just before BP was able to cap the well on July 15.

Published studies indicate that between 560,000 and 1,400,000 barrels per year (1,534 to 3,835 barrels per day) of oil seep into the Gulf of Mexico from natural sources. Dozens of natural seeps have been identified off the coasts of Louisiana and Texas, some in the region of the Deepwater Horizon site.

Oil Spill

Approximately 637 miles of Gulf Coast shoreline were covered in oil – approximately 362 miles in Louisiana, 109 miles in Mississippi, 70 miles in Alabama, and 96 miles in Florida.

More than 3.41 million feet of containment boom and 7.82 million feet of absorbent boom have been deployed to contain the spill. The combined boom deployed is equal to 2,127 miles.

Dispersants

First time dispersants have been used underwater.

On May 20, the EPA ordered BP to stop spraying Corexit 9500 in the water and find a less toxic alternative. But the oil company refused, saying the product continued to be "the best product for subsea application."

On May 26, the EPA and Coast Guard directed BP to reduce the amount of dispersant by 75%.

BP estimates 1.84 million gallons (1.07 million on the surface and 771,000 underwater) of Corexit were used to disperse the 4.9 million barrels of oil released from its blown out well. The amount of dispersant released is equivalent to 2.78 Olympic sized swimming pools.

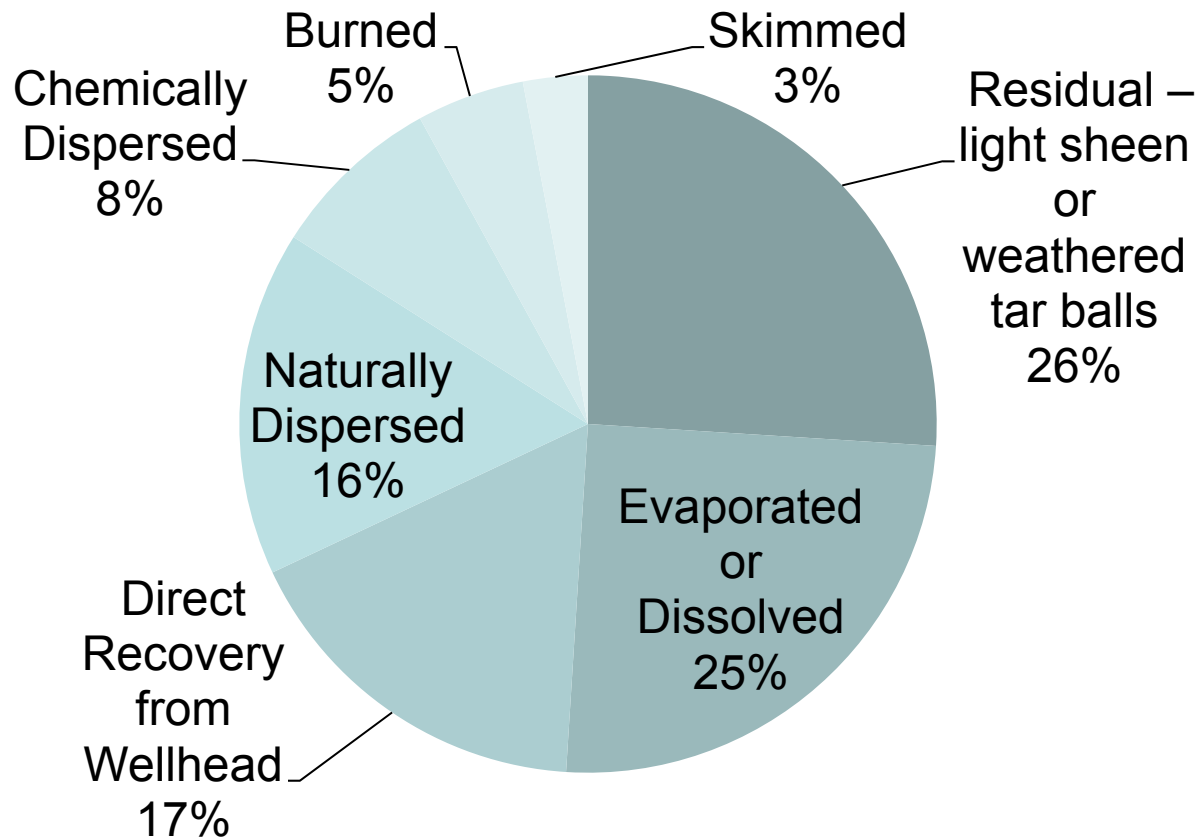
Dispersants

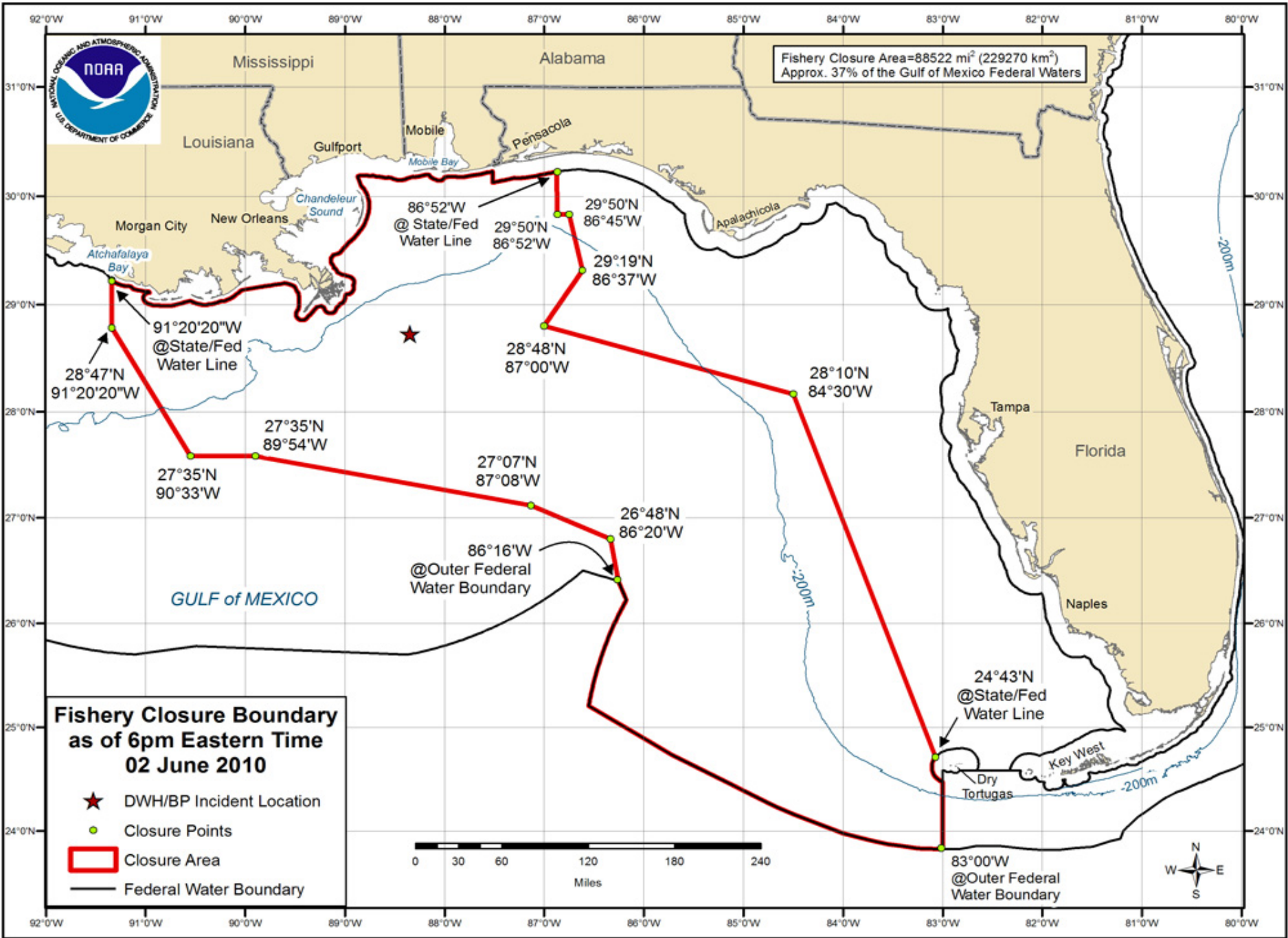
EPA conducted tests indicated that the eight dispersants tested are similar to one another based on standard toxicity tests on sensitive aquatic organisms found in the Gulf. These results confirm that the dispersant used in response to the oil spill in the Gulf, Corexit 9500A, is no more or less toxic than the other available alternatives.

For all eight dispersants with mysid shrimp and inland silversides, the dispersants alone were less toxic than the dispersant-oil mixture. Oil alone was found to be more toxic to mysid shrimp than the eight dispersants when tested alone. The oil results for small fish were inconclusive.

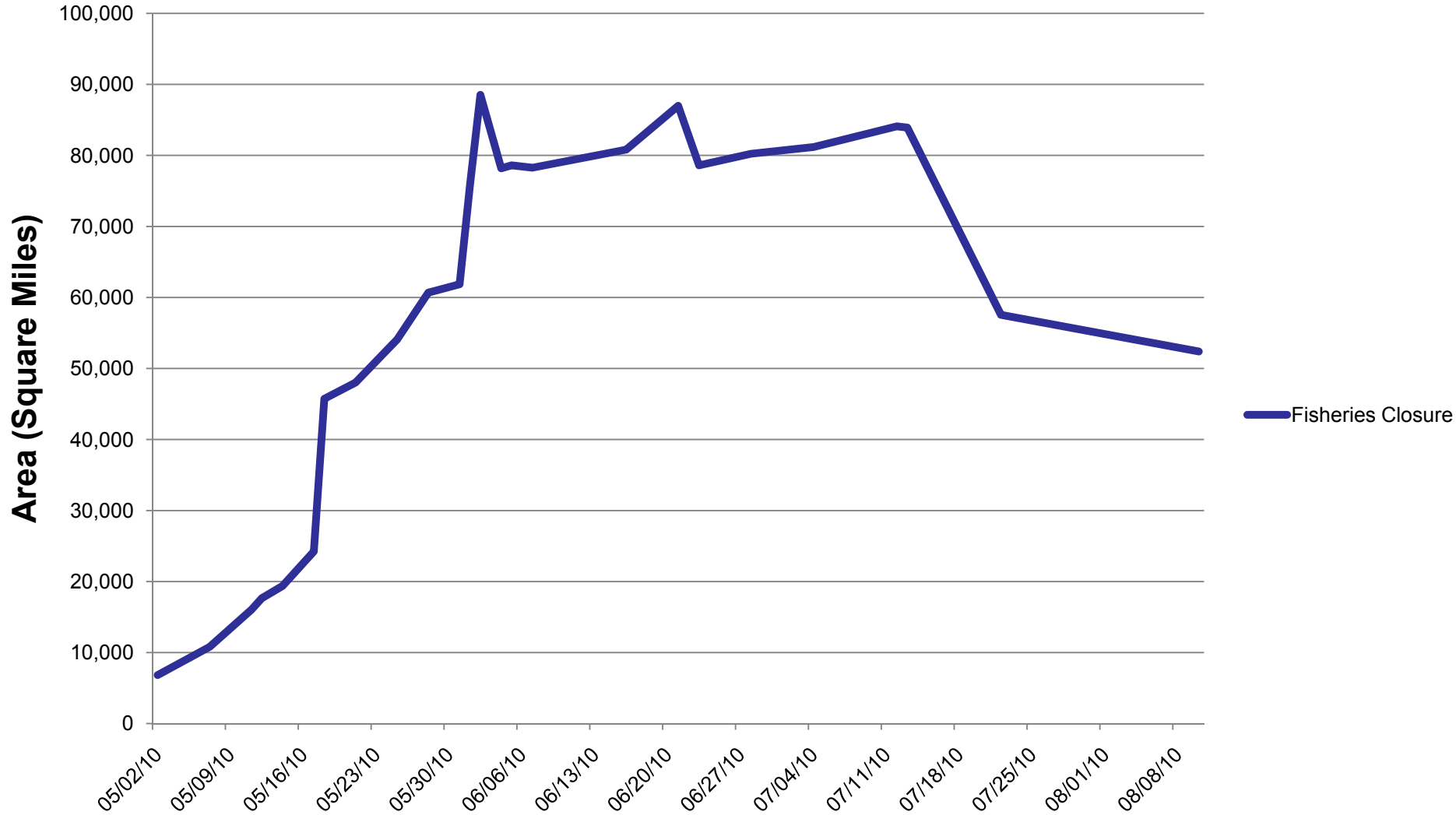
Fate of Oil

National Incident Command's Flow Rate Technical Group estimates that approximately 4.9 million barrels of oil flowed from the BP Deepwater Horizon wellhead between April 22 and July 15, 2010. There is a 10% estimate uncertainty.





Federal Waters Fisheries Closure



The June 2, 2010 closure represented 36.6% of Federal waters in the Gulf of Mexico.

Testing Protocol to Reopen Closed Waters

NOAA, FDA, EPA, and the Gulf States are implementing a comprehensive, coordinated, multi-agency program to ensure that seafood from the Gulf of Mexico is safe to eat.

Two ways that oil can cause seafood to be unfit for consumption. The first is through the presence of polycyclic aromatic hydrocarbons (PAHs), some of which are carcinogenic. PAHs are of greatest concern because they can be harmful if consumed in sufficient amounts over a prolonged period of time. The second way is if it smells like petroleum.

Dispersants used during the oil spill have a low potential to bioaccumulate in seafood and are low in human toxicity, therefore there is likely little public health risk associated with consuming seafood that has been exposed to dispersants.

Testing Protocol to Reopen Closed Waters

Some closed areas never actually exposed to oil. If it can be confirmed that a harvest area was never exposed to oil, that area may be reopened without first testing seafood samples.

Reopening waters that were exposed to oil involves that the water be free of oil. For a closed area to reopen samples of the species taken from the waters must successfully pass both a sensory examination and chemical analysis in an approved laboratory. Testing will be performed on finfish, shrimp, crabs, and oysters.

Testing Protocol to Reopen Closed Waters

Criteria for sensory testing: A sample consists of the edible portion of the species of seafood being tested. A panel consisting of a minimum of 10 expert sensory assessors that evaluate each sample in both a raw and cooked state. In order for an area to be considered acceptable for reopening from a sensory standpoint a minimum of 7 of 10 assessors must find no detectable petroleum or dispersant odor or flavor from each sample. If any sample fails, the site from which it was collected remains closed.

Criteria for chemical testing: If all tested samples of a given species from a collection site pass the sensory criteria, additional samples will undergo chemical analysis to determine if harmful levels of PAHs are present. If the levels of PAHs in the seafood samples do not pose a health concern the site will be considered eligible for reopening.

Water



EPA's surface water samples collected August 3-5, 2010 along the Gulf Coast did not reveal elevated levels of chemicals usually found in oil.

Surface water samples collected July 30 and August 3 and 5, 2010 along the Gulf Coast were measured for chemicals associated with dispersants but did not detect them.

Sediment



EPA's sediment samples collected on August 2 and 3, 2010 along the Gulf Coast did not reveal elevated levels of chemicals usually found in oil.

Sediment samples collected July 14, 2010 along the Gulf Coast were measured for chemicals associated with dispersants but did not detect them.

Fish and Crustaceans

A map of the Gulf of Mexico region, showing the coastline of the United States and Mexico. The Gulf of Mexico is highlighted in a light blue color, while the surrounding landmasses are in a darker blue. The map is centered on the Gulf of Mexico, with the United States coastline to the north and west, and the Mexican coastline to the south and east.

So far, FDA and NMFS sampling have not found contaminated fish or shellfish from any areas of the Gulf of Mexico affected by the oil spill.

What We Don't Know

Long-term impacts on fish and wildlife resources within the area. How will oil and dispersed oil affect juvenile and adult organisms? How will it affect eggs and larvae?

Fate and transport of possible subsurface plumes of dispersed oil.

Impacts on coastal wetlands. In Louisiana if the vegetation dies, will the land still be there in the future to allow growth of new plants?

Economic impact of the disaster on fisheries, processors, fishing communities, seafood dependent businesses, etc.

Economic Impact

In 2008, the Gulf commercial fishing industry landed 1.274 billion pounds of fish and shellfish with a dockside value of \$659 million.

When related processor, wholesale, and retail businesses are included, the Gulf seafood industry supports over 200,000 jobs with related income impacts of \$5.5 billion.

The top commercial species in terms of value are shrimp (\$367 million), menhaden (\$64 million), oysters (\$59 million), and blue crab (\$38 million).

Recreational fisheries also make significant contributions to the region's economy. In 2008, recreational anglers took 25.4 million fishing trips and spent over \$12 billion on equipment and trips in the Gulf region.

Economic Impact

2010 Supplemental Appropriations Act was signed on July 29, 2010 and includes assistance to help fisheries and recreational fishing-dependent businesses survive the fallout from the BP Deepwater Horizon oil leak disaster.

The 2010 Supplemental Appropriations Act provides \$15 million for fishery-dependent businesses harmed by the spill. The amendment also includes \$10 million for an expanded stock assessment of the Gulf of Mexico fisheries, and \$1 million for a National Academy of Sciences study of the long-term impacts of the oil spill on the Gulf's ecosystem.

January -June (2006-2010)

GOM Shrimp Landings (all species, headless, thousands of pounds) Average GOM \$/lb

