



U.S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Region

March 2005

Contact: Dr. Joe Trahan
(504) 736-2595

Debra Winbush
(504) 736-2597

***Potential Spatial and Temporal Vulnerability of Pelagic Fish Assemblages
in the Gulf of Mexico to Surface Oil Spills Associated
with Deepwater Petroleum Development***

OCS Study MMS 2005-012

The Minerals Management Service (MMS), Gulf of Mexico OCS Region, announces the availability of a new study report, *Potential Spatial and Temporal Vulnerability of Pelagic Fish Assemblages in the Gulf of Mexico to Surface Oil Spills Associated with Deepwater Petroleum Development*.

This study was undertaken to review the available information on the distributions of selected pelagic fish species in order to predict the spatial and temporal distributions of larval, juvenile, and adult life history stages within the surface waters over an area likely to experience increasing gas and petroleum extraction. The study area was defined as the waters over the 200- to 2,000-m isobaths, and in some areas deeper than 2,000 m, extending from 28° N to 26° N latitude and from 96.4° W to 84.3° W longitude. This region provides habitat for a variety of fish species of considerable ecological, recreational, and commercial importance. Compared with data about fish species inhabiting the inshore waters of the northern Gulf, relatively little information about the distributions and ecology of these offshore taxa is known.

Target taxa were pelagic fishes, including selected members of the *Sargassum* community. Pelagic species were considered of primary importance because (1) most produce large numbers of small eggs with limited yolk reserves that hatch into larvae dependent on plankton in the near-surface waters for nutrition; (2) most fisheries target pelagic fish taxa; (3) oil is buoyant and will accumulate in the near-surface waters; (4) based on observation of slicks formed by natural petroleum seeps, scientists think that even oil released from near the bottom will likely rise to the surface; and (5) it is unlikely that there is sufficient information on the distributions of demersal or benthic fishes to make even a well-reasoned inference about their spatial and temporal distributions. The report has summarized the available distributional data for each species on a monthly basis and attempted to predict the distributions of larvae, adults, and juveniles (when possible) within the study region. Data for each taxon and stage are provided in separate Microsoft Excel worksheets for each taxon and life history state.

This report is available only in compact disc format from the Minerals Management Service, Gulf of Mexico OCS Region, at a charge of \$15.00, by referencing OCS Study MMS 2005-012. The report may be ordered through the Minerals Management Service's on-line ordering system at <http://www.gomr.mms.gov/WebStore/front.asp>. You will be able to obtain this report also from the National Technical Information Service in the near future. Here are the addresses. You may also inspect copies at selected Federal Depository Libraries.

Minerals Management Service
Gulf of Mexico OCS Region
Public Information Office (MS 5034)
1201 Elmwood Park Boulevard
New Orleans, Louisiana 70123-2394
Telephone requests may be placed at

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, Virginia 22161
(703) 487-4650 or FAX: (703) 321-8547
Rush Orders: 1-800-336-4700

(504) 736-2519, 1-800-200-GULF, or
FAX: (504) 736-2620

MMS, part of the U.S. Department of the Interior, oversees 1.76 billion acres of the Outer Continental Shelf, managing offshore energy and minerals while protecting the human, marine, and coastal environments through advanced science and technology research. The OCS provides 30 percent of oil and 23 percent of natural gas produced domestically, and sand used for coastal restoration. MMS collects, accounts for, and disburses mineral revenues from Federal and American Indian lands, with fiscal year 2004 disbursements of around \$8 billion and more than \$143 billion since 1982. The Land and Water Conservation Fund, which pays for acquisition of state and federal park and recreation land, gets nearly \$1 billion a year.

MMS Main Website: www.mms.gov
Gulf of Mexico Website: www.gomr.mms.gov

*** MMS: Securing Ocean Energy and Economic Value for America ***

[Return to Technical Announcements](#)