

STUDY TITLE: South Atlantic Information Resources: Data Search and Literature Synthesis

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APPLICABLE PLANNING AREAS: South Atlantic

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BACKGROUND: The South Atlantic Planning Area extends between the North Carolina-South Carolina border to Palm Bay, Florida, and covers 54.34 million acres. This area has unique physical oceanography, physiography, and zoogeography; numerous valuable fisheries; and a pristine coastal and marine environment. The continental shelf reaches 130 kilometers at its widest point off Georgia. The coastal region is dominated by barrier islands that progressively decrease in length toward the head of the Georgia Bight, which has the highest tides of the U.S. Atlantic coast south of Maine. The Santee River is the largest river along the U.S. Atlantic coast and forms the Santee Delta. In South Carolina, 42% of the coastline is preserved open coast. In Georgia, over 80% of the coastline (ten of the thirteen barrier island groups) is undeveloped. The last major study of the physical oceanography of the South Atlantic OCS was conducted for the Minerals Management Service in the early 1980s. The U.S. Department of Energy sponsored research in the area between 1977 and 1991. Because of the growing interest in offshore oil exploration and development, sand and gravel extraction, and renewable energy development, there was a clear need for a current synthesis of literature for the area.

OBJECTIVES: The project objectives were to develop comprehensive literature syntheses of the environmental and human aspects of the South Atlantic Planning Area and update the understanding of the ecological communities, dominant physical oceanographic and other processes that drive the shelf and deep-sea ecosystems, and the potential sensitivities of the area.

DESCRIPTION: A comprehensive literature search was completed to identify relevant existing information on resources in the study area and the potential impacts of offshore oil and development, sand and gravel extraction, renewable energy development. All cited references were compiled in an electronic annotated bibliography organized into the following disciplines and the number of records in the database per discipline: Geological Oceanography, 270 records; Oceanography and Air-Sea Interactions, 230 records; Chemical Oceanography, 222 records; Plankton Communities, 214 records; Benthic Resources, 849 records; Fish and Fish Habitats, 454 records; Marine and Coastal Birds and Bats, 305 records; Sea Turtles, 101 records; Marine Mammals, 150 records; and Social and Economic Sciences/Areas of Special Concern/Research and Development Technology, 170 records. Combined, the databases contain 2,966 records. The deliverables included data and metadata on the spatial extent of the studies cited in the report. All spatial files were organized by discipline and have a corresponding record in the bibliographic database, also separated by discipline.

The report is divided into chapters that cover the entire range of topics for each resource areas. Each chapter is designed to stand alone; therefore, each chapter includes a detailed table of contents, lists of figures and tables, and list of references cited in that chapter. The chapter headings include descriptions of the resource in the South Atlantic Planning Area, discussion of the potential impacts of OCS development including oil and gas, sand and gravel extraction, and renewable energy (with emphasis on wind energy development), and a summary and identification of data gaps in that resource area with regard to OCS development in the region. The final chapter is a summary synthesis that discusses the unique characteristics of the South Atlantic Planning Area, key seasonal patterns, ecological relationships, and data gaps

STUDY PRODUCT: Michel, J. (ed.). 2013. South Atlantic information resources: data search and literature synthesis. U.S. Department of the Interior, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region, New Orleans, LA. OCS Study BOEM 2013-01157. 984 pp.