

STUDY TITLE: Northeastern Gulf of Mexico Coastal Ecological Characterization

REPORT TITLE: Alabama Coastal Region Ecological Characterization. Volume 3, A Socioeconomic Study

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SPONSORING OCS REGION: Gulf of Mexico

APPLICABLE PLANNING AREAS: Eastern Gulf of Mexico; Central Gulf of Mexico

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CUMULATIVE PROJECT COST: \$1,185,000

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KEY WORDS: Eastern Gulf; Central Gulf; Alabama; baseline; socioeconomics; population; demographics; development; minerals; tourism; recreation; commercial fishing; recreational fishing; agriculture; transportation; pollution; characterization; literature review; synthesis.

BACKGROUND: This study is one of a series of characterizations produced by the U.S. Fish and Wildlife Service and jointly funded with the Bureau of Land Management (presently the Minerals Management Service). The series attempts to describe relationships between human population growth and availability of natural resources in coastal areas. Planners and managers, among others, should find this report and its data base useful for coastal resource planning and management.

OBJECTIVES: (1) To compile and synthesize information from existing sources concerning social, demographic, and economic factors in the Alabama coastal region.

DESCRIPTION: The socioeconomic study consists of a series of chapters containing quantitative and qualitative descriptions of nine regional socioeconomic components. Recommendations for planners and identification of data gaps are given in each chapter. The chapters concern: (1) social and demographic characteristics; (2) industrial and residential development; (3) agricultural and forestry production; (4)

mineral production; (5) commercial fishing; (6) transportation; (7) recreation/tourism; (8) multiple use conflicts; and (9) environmental issues and regulations. All figures and tables are given in a data appendix in the order that they appear in the text. Data were obtained from various published documents. Except for evaluation and interpretation, the document is based entirely on secondary sources.

SIGNIFICANT CONCLUSIONS: Coastal Alabama, similar to other coastal areas, has natural resources that cause it to be attractive for recreation, residential, and industrial development. Conflicts arise as development demands alteration to coastal ecosystems. As demand for coastal resources increases, land use and resource planners are confronted with greater challenges in attempts to maintain a proper balance among competing users.

STUDY RESULTS: Coastal Alabama is a fast growing area. Population in Mobile and Baldwin Counties increased from 174,300 in 1940 to 442,800 in 1980. Rapid growth is expected to continue. Population at Mobile, the area's largest population center, currently is about 200,500. Compared to many areas of the Nation, people of coastal Alabama are less affluent and less educated. The coastal population characteristically contains a high percentage of minorities (e.g., blacks). Recent trends indicate that the gap in income is narrowing.

The basic regional industries or services are paper and allied products; shipbuilding and repair; chemicals and allied products; construction; transportation; communication; utilities; lumber and wood products; services; and wholesale and retail trade. The region's employment increased from 131,600 in 1969 to 172,300 in 1978 and could reach 233,400 by 2000. Impetus for future economic expansion will be generated by the Tennessee-Tombigbee Waterway, increased coal shipments through the Port of Mobile, and expanded production, storage, and transportation of oil and gas. Regional land area is 7,484 km² (2,890 mi²). In 1975, forested lands made up 48% of the total land; agriculture, 19%; transportation, communication, and utilities, 3%; residential, 2%; industrial and commercial, 1%; and undeveloped, 27%.

Although agriculture and forestry are dominant land uses in the region, income from these sectors is relatively low. In 1978, agriculture, directly and indirectly, generated about 11% of total employment and income, and forestry generated only 1%. Principal agricultural products are soybeans, vegetables, cattle, and nursery products. Major forestry products are lumber and pulpwood.

Principal mineral industry products are oil, gas, sand, gravel, clay, and oyster shells. Oil and gas production is economically most important, representing a relatively new but rapidly growing regional industry. In 1979, Alabama ranked 17th nationally in oil production and 20th in natural gas production. Recent natural gas discovery in Mobile Bay has increased interest in bay, nearshore, and offshore exploration. In April 1980, the State leased 13 tracts in Mobile Bay, Mississippi Sound, and the Gulf of Mexico 3-mile offshore area; in the near future, tracts in Federal OCS waters may be offered.

In 1978, 23 finfish species and 7 shellfish species were landed commercially in coastal Alabama. Shrimp have consistently ranked first in volume and value since 1955, accounting for 33 to 50% of total pounds landed and 80 to 85% of dockside value. Oyster (\$1.2 million dockside in 1976) and crab (\$281,000 dockside in 1976) fisheries are relatively small. Atlantic croaker is the principal regional finfish species. Other commercial saltwater species include spotted seatrout, southern flounder, and striped mullet. Commercial freshwater fisheries exist for channel catfish, smallmouth buffalo, and freshwater drum.

Coastal Alabama is served by a well developed transportation system. Terminal facilities for rail, highway, air, and water are centered in Mobile County. Water transportation centered around Mobile Bay with a system of navigable waterways is dominant and has been the primary contributor to the area's economic development since the 17th century. Mobile Bay ranks 13th among the Nation's ports, handling mostly bulk commodities (coal, grain, and iron ore). The Tennessee-Tombigbee Waterway, scheduled for completion in 1986, will link the Tennessee and Ohio Rivers to the Tombigbee River and Port of Mobile. The Port of Mobile and Mobile Harbor are undergoing expansion to accommodate expected increased transport. Intercity highway transportation is served by I-10 and I-65. Rail service (freight only) is provided by four railroads--Louisville and Nashville, Illinois Central Gulf, St. Louis-San Francisco (Frisco), and Southern. Commercial air transportation is available at Bates Field and Brookley Field.

In 1980, resident and tourist outdoor recreation in Mobile and Baldwin Counties was expected to add up to over 51 million user days. Most of the user participation was near the shore. An estimated 4.4 million tourists visited the two county area and spent \$117.8 million. Sportfishing and hunting are major regional sports. The Mobile Delta is the principle freshwater fishing area for largemouth bass, sunfish, crappies, channel catfish, and alligator gar. Marine fishermen use all regional estuaries and bays, as well as Mississippi Sound and Gulf waters. Principal sport species are amberjack, Spanish and king mackerel, southern flounder, striped mullet, and spotted sea trout. Shrimping and crabbing also are major sport activities. Hunting seasons begin in mid-September and continue to late April. Duck and raccoon are hunted in the lower Delta. Whitetail deer, turkey, and small game are taken in most areas of the region.

Many of the social and economic benefits prevalent in the region are dependent upon natural resources. Competition for these resources causes multiple-use conflicts and environmental stress. Although the conflicts generate some social, economic, and political repercussions, the issues usually are environmental. Major environmental conflicts are dredging, mining, petroleum extraction, construction, transportation, pollution, waste disposal, farming, and logging. Recreation activities most likely to be affected by these multiple uses are commercial fishing, sportfishing, hunting, recreational boating, swimming, hiking, and camping.

Water pollution is a serious problem in and adjacent to Mobile Bay. Spoil disposal from port and channel construction and maintenance has caused environmental concerns. Alteration or destruction of marshes and shallow bay bottoms caused by port,

commercial, residential, and recreational development needs to be prevented. Principal point discharges are municipal sewage treatment facilities, paper mills, and chemical plants. Nonpoint discharges include urban storm water runoff and septic chainfields in low lying areas. Air pollution is confined to Mobile County. A major environmental issue is natural habitat loss. Estuaries, marshes, and barrier islands provide storm protection, waste assimilation, and recreation. Threatened and endangered natural lands and waters and other areas of high ecological value to man are the Mobile Delta, coastal barrier islands, submerged grassbeds, tidal marshes, wet acid pinelands, mesic ravine woods, and habitats of endangered and threatened species.

STUDY PRODUCTS: Friend, J. H., M. Lyon, N. N. Garrett, J. L. Borom, J. Ferguson, and G. C. Lloyd. 1982. Alabama Coastal Region Ecological Characterization. Vol. 3, A Socioeconomic Study. A final report by the U.S. Fish and Wildlife Service for the U.S. Department of the Interior, Minerals Management Service Gulf of Mexico OCS Office, Metairie, LA. NTIS No. PB83-190017. FWS/OBS-81/41. Contract No. 14-12-0001-30037. 367 pp.