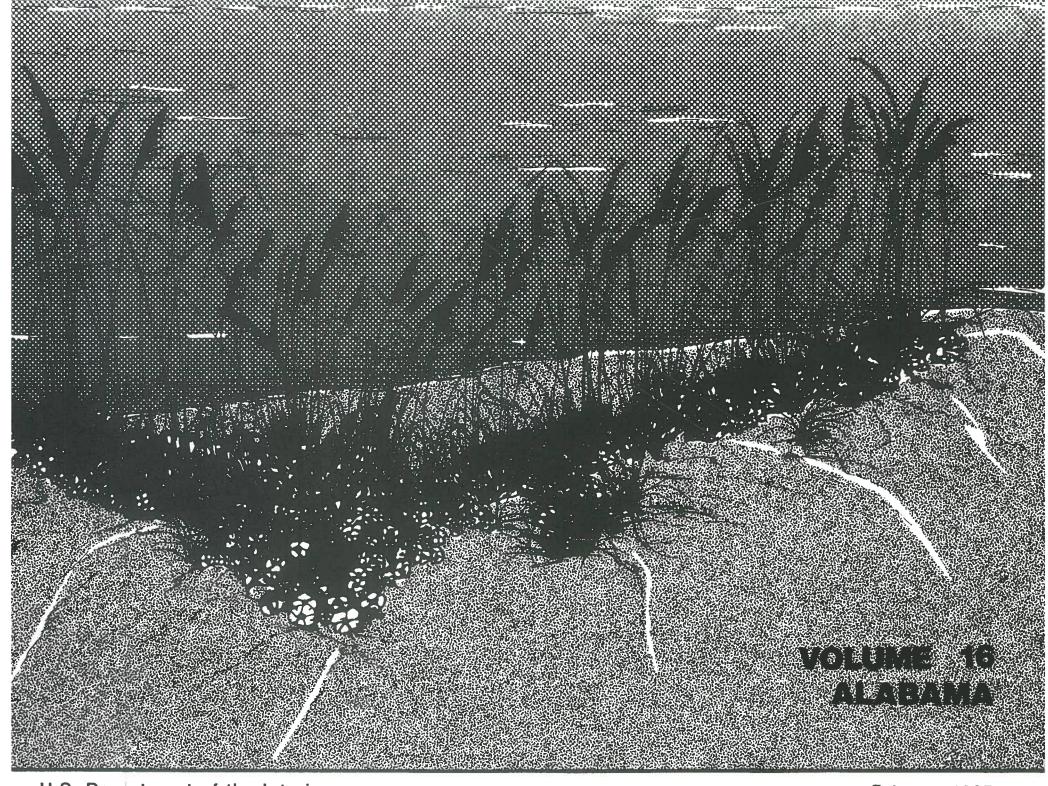
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# REPORT TO CONGRESS: COASTAL BARRIER RESOURCES SYSTEM

Proposed Recommendations for Additions to or Deletions from the Coastal Barrier Resources System



U.S. Department of the Interior



# REPORT TO CONGRESS: COASTAL BARRIER RESOURCES SYSTEM

# **VOLUME 16**

Proposed Recommendations for Additions to or Deletions from the Coastal Barrier Resources System

## ALABAMA

Mapped, edited, and published by the Coastal Barriers Study Group

United States Department of the Interior William P. Horn, Assistant Secretary for Fish and Wildlife and Parks

# February 1987

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#### ALABAMA

#### INTRODUCTION

The Coastal Barrier Resources Act (CBRA) of 1982 (Public Law 97-348) established the Coastal Barrier Resources System (CBRS), a system of undeveloped coastal barriers along the Atlantic and Gulf of Mexico coasts. This atlas of coastal barriers in Alabama has been prepared in accordance with Section 10 of CBRA (16 U.S.C. 3509), which states:

Sec. 10. Reports to Congress.

(a) In General.--Before the close of the 3-year period beginning on the date of the enactment of this Act, the Secretary shall prepare and submit to the Committees a report regarding the System.

(b) Consultation in Preparing Report.—
The Secretary shall prepare the report required under subsection (a) in consultation with the Governors of the States in which System units are located and with the coastal zone management agencies of the States in which System units are located and after providing opportunity for, and considering, public comment

(c) Report Content.--The report required under subsection (a) shall contain--

- (1) recommendations for the conservation of fish, wildlife, and other natural resources of the System based on an evaluation and comparison of all management alternatives, and combinations thereof, such as State and local actions (including management plans approved under the Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.)), Federal actions (including acquisition for administration as part of the National Wildlife Refuge System), and initiatives by private organizations and individuals;
- (2) recommendations for additions to, or deletions from, the Coastal Barrier Resources System, and for modifications to the boundaries of System units;
- (3) a summary of the comments received from the Governors of the States, State coastal zone management agencies, other government officials, and the public regarding the System; and

(4) an analysis of the effects, if any, that general revenue sharing grants made under section 102 of the State and Local Fiscal Assistance Amendments of 1972 (31 U.S.C. 1221) have had on undeveloped coastal barriers.

This atlas of Alabama includes delineations of the CBRS units designated by Congress in 1982 and delineations of proposed recommendations for additions and modifications to the CBRS that will be provided to Congress by the Department of the Interior following public review and comment.

Under the direction of the Assistant Secretary for Fish and Wildlife and Parks, this report has been prepared by the Coastal Barriers Study Group, a task force of professionals representing the National Park Service, U.S. Fish and Wildlife Service, U.S. Geological Survey, and other Departmental offices.

## **BACKGROUND**

The State of Alabama has one of the most scenic coastlines along the Gulf of Mexico. Along the coastline are wide marshlands; Dauphin Island, an 18-mile long and partly forested barrier island; and the Fort Morgan peninsula, which is attached to the mainland at the community of Gulf Shores, Baldwin County. At the center of the coastline is a large estuary--Mobile Bay--a drowned valley of the Mobile River. In the head of the bay, the Mobile River has built a delta system. In spite of some growth in recent history, the Mobile Delta today experiences land loss (Hardin et al. 1976), probably because of sediment impoundments by dams in the drainage basin

Recreation in coastal Alabama revolves around sports fishing and beach use. The primary issue perceived by the State regarding these resources is improved access to accommodate the State's numerous pleasure boats. About 9,200 acres in Baldwin County and 1,700 acres of Mobile County are publically owned for recreation. The western, undeveloped part of Dauphin Island (CBRS unit Q02) had for some time been leased by Mobile County, but the lease has now expired. The State legislature has tried unsuccessfully to appropriate funds to purchase the land. Major commercial recreational facilities are available at Gulf Shores and eastern Dauphin Island.

Hurricanes and tropical storms dramatically affect the environment along the Alabama coast. The coastal erosion problem is severe in Alabama. Of 504 miles of estuarine and gulf shoreline, 220 miles are eroding. More than 90 percent of the gulf shoreline is eroding. The rate of erosion typically averages 10 feet per year but increased in some areas to 120 feet in a day during Hurricane Frederic. The State advocates nonstructural remedies for this erosion problem.

#### COASTAL RESOURCE MANAGEMENT

#### Alabama Coastal Resource Management

Alabama Coastal Management Act (Act No. 534). The State's efforts in regulating coastal zone activities began with the establishment of the Coastal Area Board (CAB) by the 9-7-14 Code of Alabama in 1975 and with the board's reconstitution by the Alabama legislature in 1976, through the Alabama Coastal Management Act. The CAB's stated purpose was to "promote, improve and safeguard the lands and waters located in the coastal areas of this State . . . . . To help accomplish this, the CAB was directed to provide for the development of a comprehensive Coastal Area Management Program (Act 534, Section 6). This program, or any rule or regulation proposed by the board, required approval by the Governor before going into effect. In 1979, CAB's Alabama Coastal Area Management Program was approved by the Governor, and the CAB was designated as the State agency responsible for its coordination. The program was designed under the guidance of both Act 534 of the Alabama legislature and the Federal Coastal Zone Management Act of 1972 (Public Law 92-583).

Act No. 82-612 (known as the "Alabama Environmental Management Act"). Passed by the Alabama legislature in 1982, this Act created the Alabama Department of Environmental Management (DEM) which assumed many of CAB's former duties. It also created a sevenmember Environmental Management Commission with the following duties:

- (a) to appoint a Director of DEM and to advise him on matters within the department's scope and authority;
- (b) to establish or adopt rules, regulations, or environmental standards;
- (c) to develop an environmental policy for the State; and
- (d) to hear and determine appeals of DEM administrative actions.

In general, to be consistent with the Alabama Coastal Area Management Program, all coastal actions must be performed in such a way as to minimize detrimental effects on all wildlife, wildlife habitats, and fishery and cultural resources.

Acting through the Environmental Management Commission, DEM was authorized to develop an environmental policy for the State. DEM is also the State agency responsible for

administering federally approved and federally delegated environmental programs.

To deal specifically with coastal issues within this new broad State environmental framework, Act 82-612 also created a Coastal Resources Advisory Committee to advise both the Department of Environmental Management and the Office of State Planning and Federal Programs on all matters concerning the coastal area. The old CAB was repealed by the same act. To provide continuity, however, the initial members of the Coastal Resources Advisory Committee were the members of the old CAB. The new coastal board, however, is purely advisory.

Permit, regulatory and enforcement functions of the Coastal Area Board were transferred to the Alabama Department of Environmental Management (Act 82-612, Sect. 4j). Other functions of the CAB, as well as its personnel, equipment, and the like, were transferred to the Office of State Planning and Federal Programs, which has subsequently been incorporated into the new Department of Economic and Community Affairs. This department now handles Alabama's grant applications and duties related to the Federal Coastal Zone Management Program.

Summary of State policy. Alabama statutes and regulations have been formulated in accordance with Federal statutes (e.g., Rivers and Harbors Act of 1899) and the Alabama Code of 1975. According to State law:

No uses determined by DEM to degrade the coastal area will be permitted unless the department determines that there is a compelling public interest.

No new dead end canals are permitted in the coastal area unless DEM determines them to be nondegrading to the environment.

Dredge spoil should preferably be deposited in uplands.

Mitigation of shoreline erosion should, to the extent possible, use nonstructural erosion control methods including preservation and restoration of dunes, beaches, wetlands, and submerged grass beds, as well as shoreline nourishment.

Emplacement of "hard" structures is permissible only when there is no technically feasible alternative.

Developments should be designed and constructed in ways that avoid increasing the potential for flooding and storm damage. Public projects should not facilitate or encourage development in the 100-year floodplains mapped by the Federal Emergency Management Agency.

Solid waste disposal is prohibited on beaches, in wetlands, or on dunes.

No degradation of wetlands or submerged grass beds is permitted, although DEM may accept the replacement or creation of an equivalent amount of wetland or grassbed as compensation for the loss resulting from an approved project.

No degradation of oyster reefs is permissible.

For building on beaches and dunes, a permit must be obtained from DEM, or the local government, if that body has developed an ordinance or plan (a local code) approved by the State. Construction is not permitted seaward of a "set back" line originally established at 40 feet behind the crest of the primary dune line. The builder may apply for a variance if the application of the setback line leads to a reduction in lot building area below the minimum practicable.

A new set-back line permanently tied to existing bench marks was surveyed in 1984.

The alteration of the primary dune system through any action is prohibited.

Recently, land owned by the State of Alabama at Plash Island, near Gulf Shores in Baldwin County, was sold to private interests for development purposes.

#### Local Actions

The Alabama Coastal Area Management Program encourages individual local governments to become actively involved in planning, zoning, and permit issues. Each governmental entity is encouraged to submit to DEM any rule, regulation, or plan (local code) it uses to grant local action permits. If approved by DEM, the local government is then authorized to administer the code. The State approval remains valid unless DEM determines that the local government is failing to enforce the code or that the code is no longer in compliance with the evolving State coastal management program.

The following State acts of local significance pertain to barrier island preservation.

Baldwin County Wild Sea Oats Act (Act 971 Regular Session, Alabama Legislature 1973). This Act makes it a misdemeanor to pick wild sea oats on the beaches of Baldwin County. For the purpose of this Act, the term "beach" means land between low water mark and established inland vegetation.

Mobile County Island Beaches and Dune Preservation Act (Acts of Alabama, 1975, Act 1096. This Act prohibits use of vehicles on any beaches and dunes in the county without specific written approval by the landowner.

Baldwin County Island Beaches and Dune Preservation Act (Acts of Alabama, 1977, Act 728). This Act authorizes Baldwin County to regulate vehicular traffic on its beaches; it does not specifically prohibit such traffic.

Counties serve as local administrative units for State functions. Their primary responsibilities lie in the issuance of permits and licenses for such activities as construction and sewage disposal in unincorporated areas.

Local municipal governments exercise a broad spectrum of responsibilities. Municipalities within the Alabama coastal zone regulate building and infrastructure development activities through the issuance of zoning ordinances and building permits. Within the coastal municipalities of Alabama, permitting requirements range from several to none.

#### Private Sector Initiatives

The State of Alabama, in its Coastal Area Management Program, strongly encourages private donation of land for public purposes. The advantage to the landowner lies in tax savings. Additionally, the landowner may include restrictions on the future use of the land in the deed of transfer. The Purdue Property, a 1,297-acre tract at the west end of Little Lagoon in Baldwin County, was recently transferred to the U.S. Fish and Wildlife Service.

The Audubon Society leases a 170-acre tract on Dauphin Island from the County of Mobile. The tract is administered as a wildlife refuge.

# EXISTING CBRS UNITS

A brief description of each existing CBRS unit in Alabama is provided below. Each unit is identified by its number, name, and the county in which it is located.

Q01-Mobile Point (Baldwin). The several parcels of this unit are all on Fort Morgan peninsula. This spit is characterized by wide, relatively stable beaches backed by primary and secondary dunes and older beach ridges. The primary dunes are vegetated by sea oats, the secondary dunes by live oaks and occasionally other shrubs. A pine palmetto community covers the interior of the spit.

QOIA-Pelican Island (Mobile). This unit contains Pelican Island and Sand Island, both sand shoals that have grown into emergent

## CBRS UNITS IN ALABAMA ESTABLISHED BY CONGRESS, 1982

Unit Name	Unit ID Code	County	Shoreline Length (miles)	Area (acres)
Mobile Point Pelican Island Dauphin Islands	Q01 Q01A Q02	Baldwin Mobile Mobile	2.5 6.1 9.0	6,368.7 1,498.1 2,811.2
Totals:			17.6	10,678.0

bars. Pelican Island lies southwest of the entrance to Mobile Bay, and south of the developed end of Dauphin Island. Between 1929 and 1973, Pelican Island grew from a subaqueous shoal to an emergent island 1.7 miles long. Despite the complete submersion of the island by Hurricane Camille in 1969, small patches of vegetation were established on its southwestern end by 1973 (Hardin et al. 1976). The island was again leveled to a subaqueous shoal by Hurricane Frederic (1979) but has since rebuilt and is now covered with sea oats and related primary vegetation. Reorientation of Pelican Island by hurricane waves is not an unusual result; such reworking of the shoal/island has been observed frequently in recorded history. Sand Island, the eastern extent of this unit, is a small shoal that has alternated between intertidal and subtidal throughout its history. After Hurricane Camille the subtidal area of Sand Island increased, but by less than 1 percent.

Q02-Dauphin Islands (Mobile). This unit includes the entire length of the island west of the limit of Bienville Boulevard. This street marks the westward extent of development on the island. A small, protected area of this unit extends from the north side of Pass Drury (Little Dauphin Island) southeastward to the harbor entrance. The rest of Little Dauphin Island north of Pass Drury is protected by the Bon Secour National Wildlife Refuge.

Dauphin Island is about 15 miles long; its eastern 8 miles have been developed. The island varies in width between 1,800 and 1,500 feet, narrowing towards its western end. The island separates the Gulf of Mexico from the Mississippi Sound and lies about 4 miles from the mainland. Its average elevation ranges between 5 and 10 feet with exceptions on the eastern and gulf side of the island where sand dunes attain heights of 45 feet.

Dauphin Island has a well-developed beach running the length of its gulf side. Landward, the bay shores are marked by beach alternating with marsh. The higher elevations on the eastern side of the island are forested. Significant erosion on the bayside of the island has left marsh outcrops and exposed tree stumps in the surf zone.

The part of the western side of the island included in the unit is largely a low lying, narrow spit. The western tip of Dauphin Island has historically been accreting at the expense of eastern and central island beaches (Hardin et al. 1976). The amount of sediment entering the system east of the island is less than that transported by longshore currents.

Dauphin Island is extremely vulnerable to hurricane winds and attendant storm waves, especially in the lower lying sections included in the unit. According to the Army Corps of Engineers' report concerning Hurricane Camille (1970), about 70 percent of Dauphin Island was inundated. The development on the extreme eastern portion of the island was spared flood damage because of its higher elevation.

The small, narrow subunit that extends from the Bon Secour National Wildlife Refuge to the harbor entrance is low in elevation, often flooded, and generally unsuitable and unsafe for future development.

#### PROPOSED ADDITIONS AND MODIFICATIONS

This section identifies proposed recommendations for additions to and deletions from the Coastal Barrier Resources System in Alabama. The Secretary of the Interior, as directed by Section 10 of the Coastal Barrier Resources Act, will make his final recommendations to the Congress after a 90-day public comment period. These proposed recommendations have been developed in response to public, State and Federal agency, and Congressional comments on the Coastal Barrier Draft Inventory developed by the Study The inventory maps were available for public comment between March 4, 1985, and September 30, 1985. The process and criteria used in the inventory were described on March 4, 1985, in the Federal Register (Vol. 50, No. 42).

The State of Alabama reviewed these documents and opposes any addition to CBRS with the exception of lands managed by the U.S. Fish and Wildlife Service. The State has also requested the deletion of six areas in CBRS Unit Q01, Mobile Point. These include the U.S. Capitol Corporation development, State Highway 180, and four individual properties.

The U.S. Army Corps of Engineers requests the deletion of the easternmost segment of CBRS unit QO1A, Pelican Island, which encompasses the Mobile Ship Channel, in order to permit the widening and deepening of the channel.

The Department received 39 other comments concerning Alabama. More than two-thirds of these favored the CBRS expansion.

The Department of the Interior proposes to recommend that all undeveloped, unprotected coastal barriers and associated aquatic habitats identified in the inventory be added to the Coastal Barrier Resources Because the segment of Mobile System. Point (Q01) in Bon Secour National Wildlife Refuge is "otherwise protected," the Department recommends that it be deleted from the The Department concurs with the unit. State's request that the U.S. Capitol Corporation's development also be deleted from Q01 because it was inappropriately placed in the System. Deletion of State Highway 180 and the four private properties would not conform with the purposes of CBRA and is not recommended. The primary purpose for widening and deepening the Mobile Ship Channel is for shipment of coal. This is an allowable exception under Section 6(A)(1) of CBRA; there is no need to delete the eastern segment of the Pelican Island Unit. A table presenting the Department's current position on each unit identified in the inventory follows this discussion.

Public comment on the proposed recommendations is solicited.

# Comments should be directed to:

The Coastal Barriers Study Group Department of the Interior National Park Service P.O. Box 37127 Washington, DC 20013-7127.

#### REFERENCE

Hardin, J.D., C.D. Sapp, J.L. Emplaincourt and K.E. Richter. 1976. Shoreline and bathymetric changes in the coastal area of Alabama, a remote sensing approach. Geological Survey of Alabama, Inf. Ser. No. 50. 125 pp.

# SUMMARY OF PROPOSED RECOMMENDATIONS FOR COASTAL BARRIERS IN ALABAMA

Unit ID Code <sup>a</sup>	Unit Name <sup>b</sup>	County	Congress. Dist.	Shoreline Length (miles) <sup>d</sup>	Area (acres) <sup>e</sup>	Proposed Recommendation f
AL-01	Perdido Key	Baldwin	1			State protected; no further con- sideration
AL-02	Gulf State Park	Baldwin	1	_	_	State protected; no further con- sideration
Q01	Mobile Point	Baldwin	1	0.50	3,264	Delete Bon Secour NWR, which is Federally protected (FWS), and U.S. Capitol Corp. development, which was mistakenly included in CBRS in 1982
Q01A	Pelican Island	Baldwin	1	6.10	1,498	No change to existing CBRS unit
Q02	Dauphin Islands	Mobile	1	9.00	2,811	No change to existing CBRS unit
AL-03 AL-04	Skunk Bayou Cypress Point	Baldwin	1	6.72	3,453	Combine AL-03 and AL-04 into one
						unit by adding similar beach and wetland habitat between the two to make one continuous unit.
	T . 1					
	Total - CBRS	as Recommen	ded	22.32	11,026	
	Existing CBR	S		<u>17.6</u>	10,678	
	Net Change i	n CBRS		+4.72	+348	

<sup>&</sup>lt;sup>a</sup>UNIT ID CODE - State initials (AL) plus a number identify a proposed new unit. An existing unit is identified by the legal code letter (Q) and number established by Congress in 1982.

bUNIT NAME - For proposed new units, this is a provisional name based on a prominent local feature. For existing CBRS units, this is the legal name.

<sup>&</sup>lt;sup>C</sup>CONGRESSIONAL DISTRICT - U.S. Congressional District in which unit is located.

<sup>&</sup>lt;sup>d</sup>SHORELINE LENGTH - For existing units with additions or deletions, this length is for the entire unit, as modified.

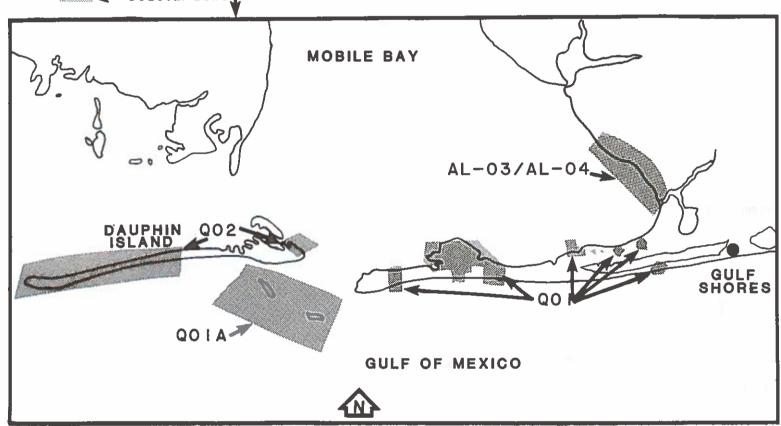
eAREA - For existing units with additions or deletions, this area is for the entire unit, as modified.

f PROPOSED RECOMMENDATION - A brief explanation of the differences between the 1985 inventory and the recommendations proposed in this revised inventory. For more detailed explanations, please contact the Study Group. Abbreviations: FWS = Fish and Wildlife Service, NPS = National Park Service, CBRS = Coastal Barrier Resources System, NWR = National Wildlife Refuge. Barriers no longer under consideration are not mapped in this atlas.

# INDEX TO EXISTING AND PROPOSED CBRS UNITS IN ALABAMA



USER NOTE: To locate the map(s) of each existing and proposed CBRS unit in this volume, consult the table below.



# EXISTING AND PROPOSED CBRS UNITS AND THEIR LOCATION IN THIS VOLUME

Unit ID Code	Unit Name	USGS Topographic Map or Map Composite	Page
Q01	Mobile Point	Bon Secour Bay	8
		Pine Beach	9
		St. Andrews Bay	10
Q01A	Pelican Island	Fort Morgan	11
Q02	Dauphin Islands	Little Dauphin Island	12
		Fort Morgan NW	13
		Petit Bois Pass	14
AL-03/AL-04	Skunk Bayou/Cypress Point	Bon Secour Bay	8

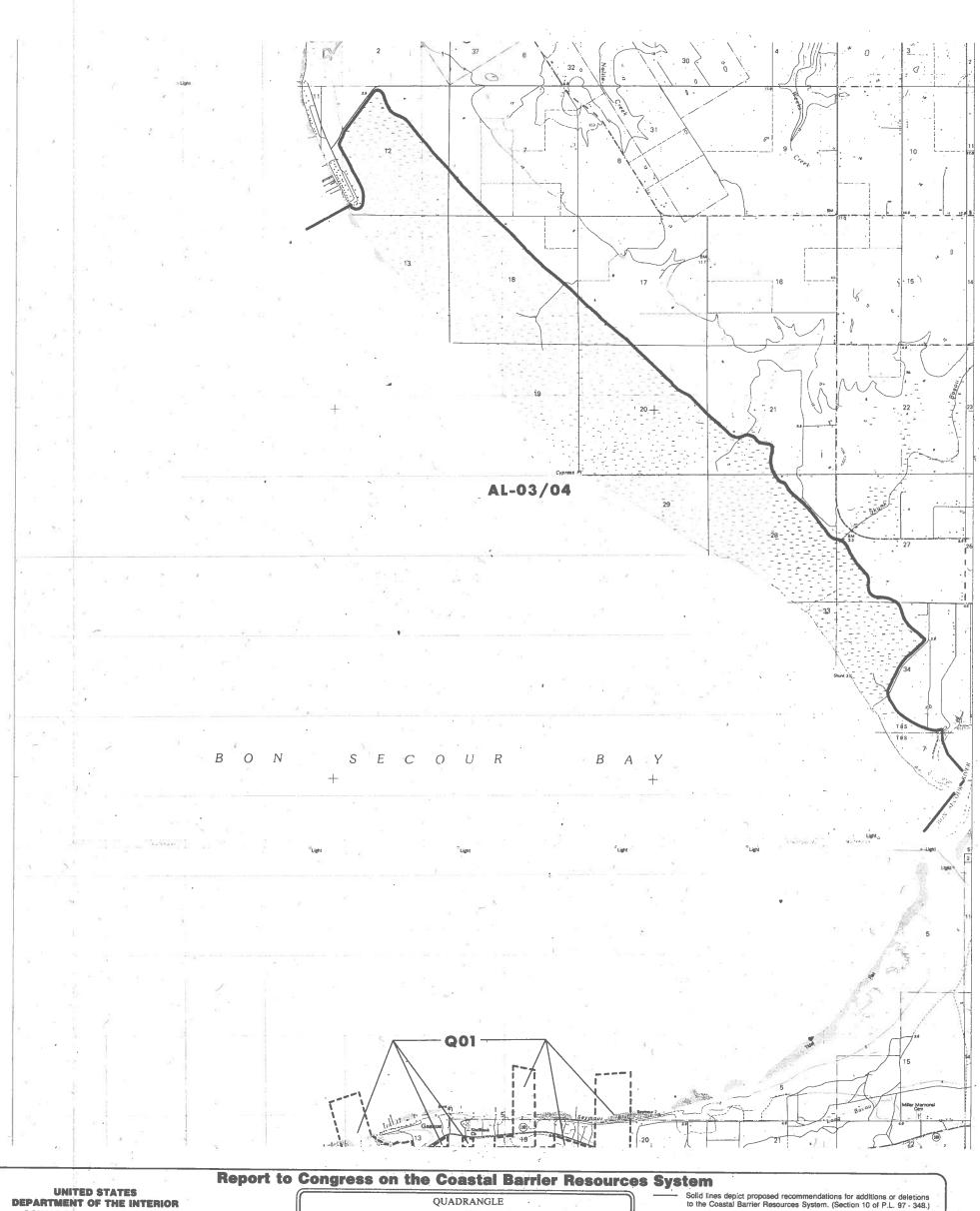
#### MAP KEY

Proposed additions to or deletions from CBRS

ADD Area recommended for addition to a CBRS unit

DELETE Area recommended for deletion from the CBRS

EXCLUDED Area excluded from an existing or proposed CBRS unit because it is developed or it is otherwise protected



DONALD P. HODEL, SECRETARY



# **BON SECOUR BAY**

→ ALABAMA

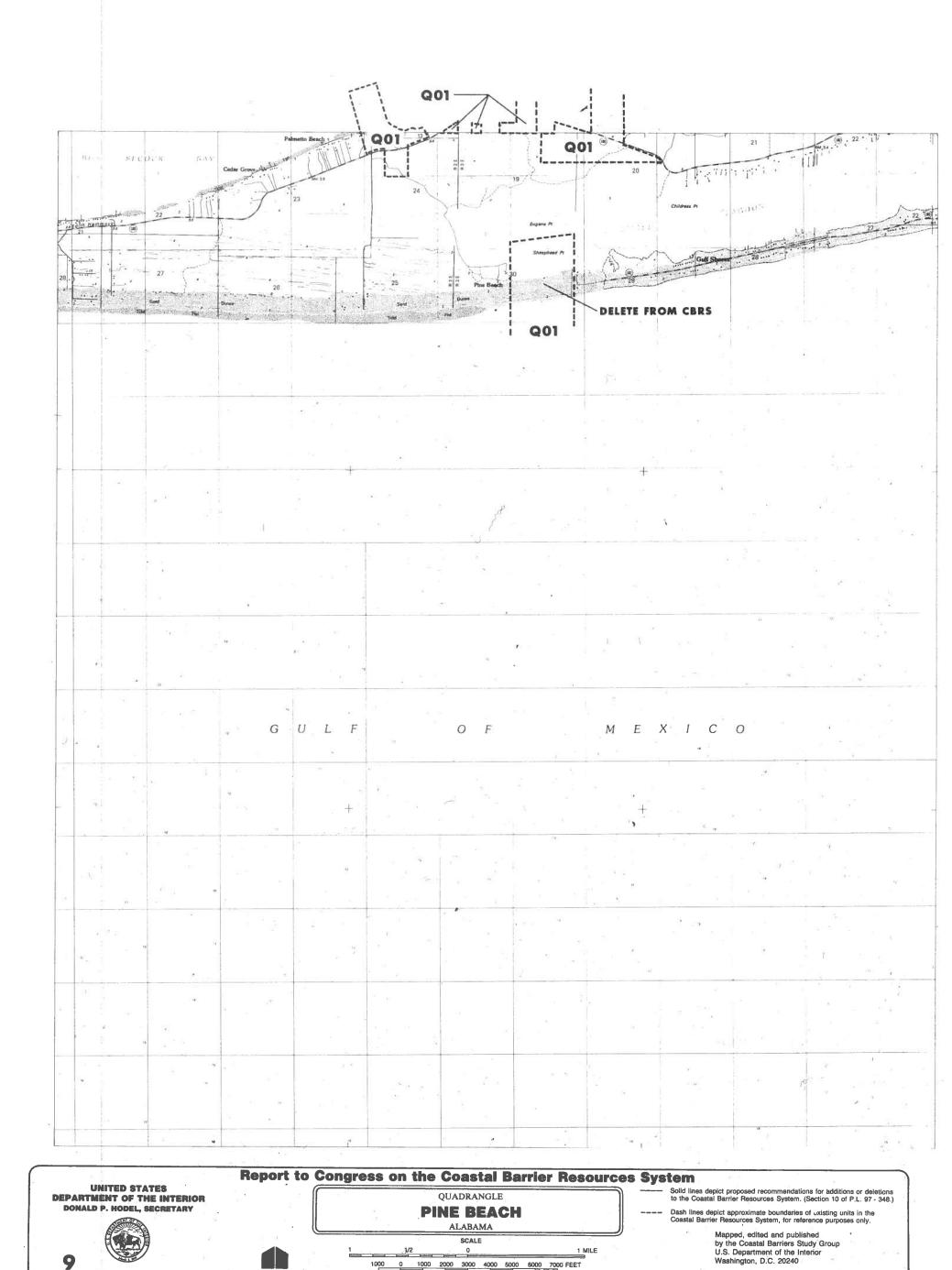
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Solid lines depict proposed recommendations for additions or deletions to the Coastal Barrier Resources System. (Section 10 of P.L. 97 - 348.) Dash lines depict approximate boundaries of existing units in the Coastal Barrier Resources System, for reference purposes only.

Mapped, edited and published by the Coastal Barriers Study Group U.S. Department of the Interior Washington, D.C. 20240

Base Map is the U.S. Geological Survey 1:24,000 scale quadrangle.

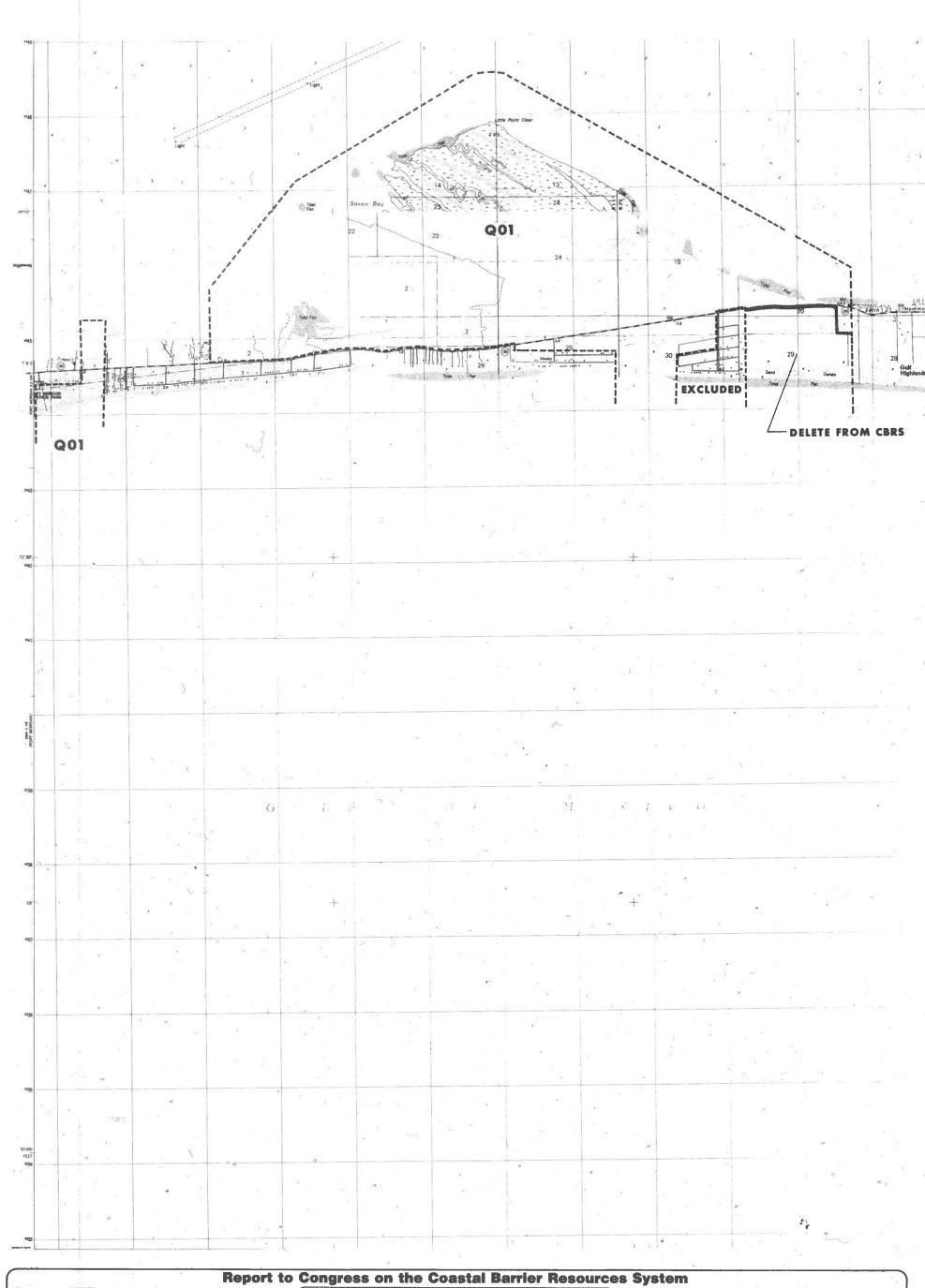


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UNITED STATES
DEPARTMENT OF THE INTERIOR DONALD P. HODEL, SECRETARY



## QUADRANGLE ST. ANDREWS BAY

ALABAMA

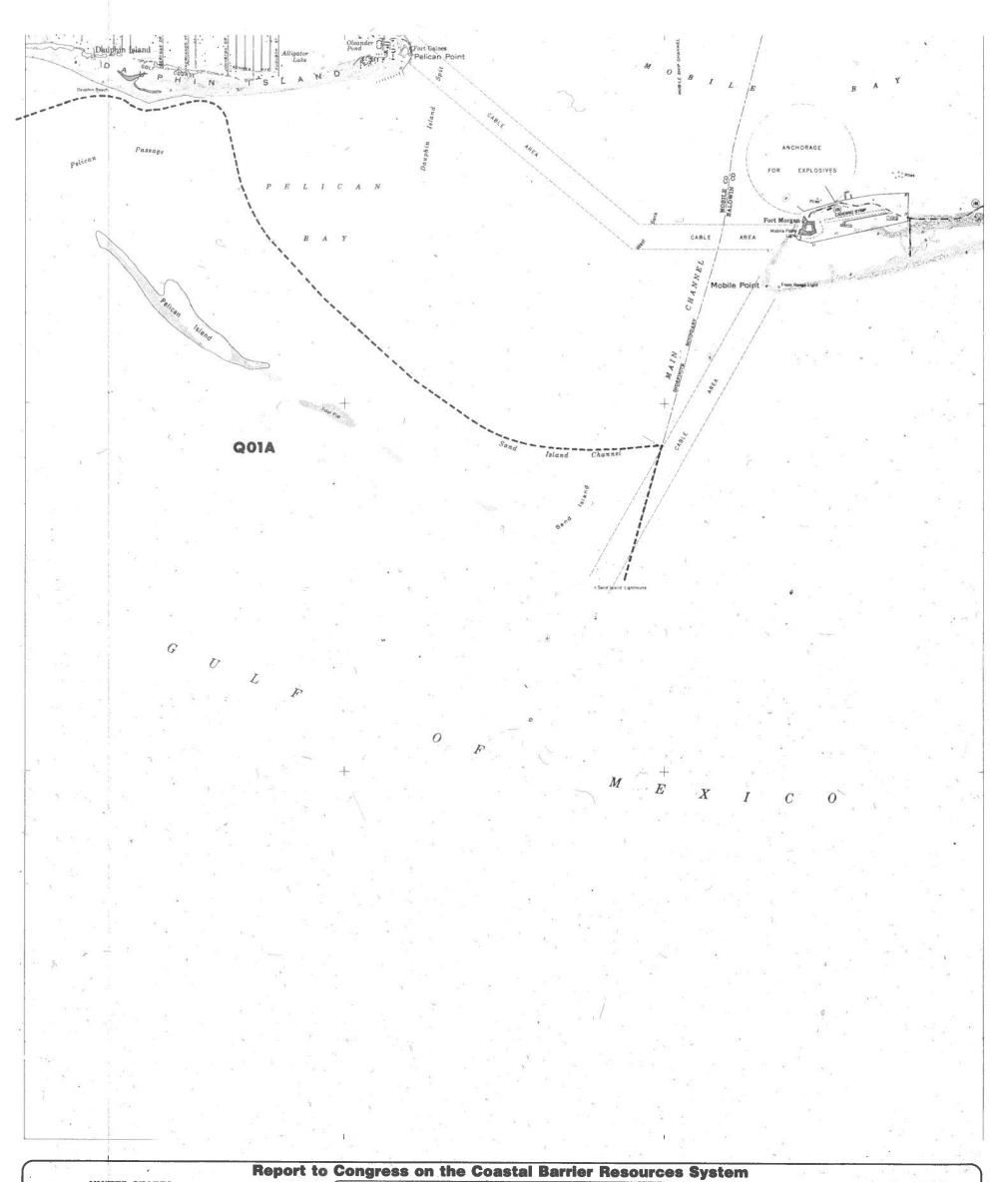
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Base Map is the U.S. Geological Survey 1:24,000 scale quadrangle.



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# OR

QUADRANGLE FORT MORGAN

ALABAMA

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Report to Congress on the Coastal Barrier Resources System

QUADRANGLE
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ALABAMA

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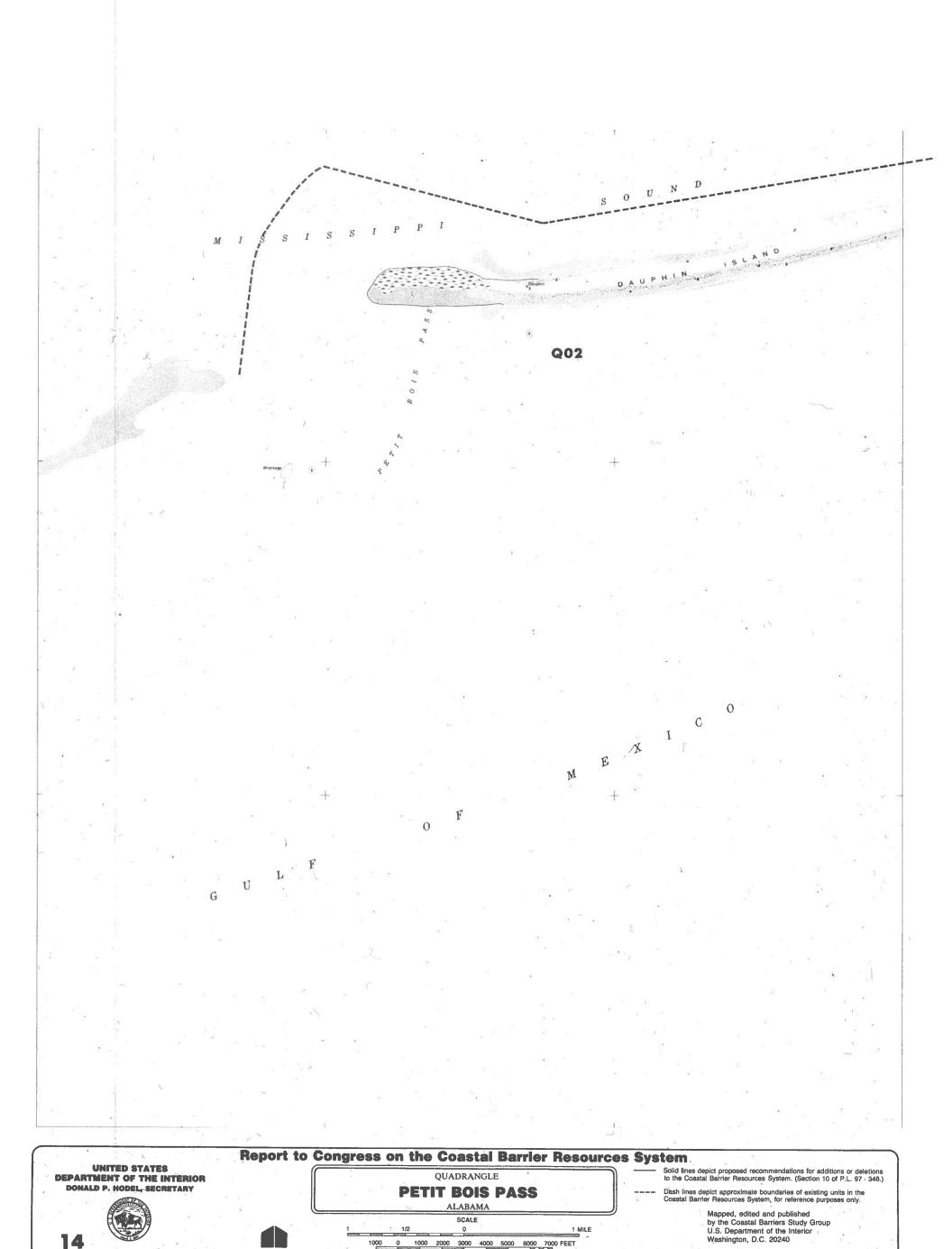
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Base Map is the U.S. Geological Survey 1:24,000 scale quadrangle.

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