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GEOGRAPHICAL DEFINITION OF MISSISSIPPI SOUND

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ABSTRACT Boundaries for Mississippi Sound are determined by application of definitions, established surveying practices and observations of the physical processes of the area. U.S. Coast and Geodetic charts 1266 (1972 edition), 1267 (1972 edition) and 1268 (1974 edition) were used in ascertaining the boundaries. These boundaries provide a formal geographical definition for Mississippi Sound.

The geographical boundaries of Mississippi Sound are ill-defined by natural features especially at the western end. This lack of generally recognized boundaries is a cause of confusion among individuals and agencies with an interest in this water body. Because of this vagueness, it is presently necessary to provide a chart or clear description of the area one refers to as "Mississippi Sound."

Of the several definitions of a sound (Gary et al. 1972), two seem appropriate for Mississippi Sound: (1) "An arm of the sea forming a channel between a mainland and an island"; (2) "A long, large, rather broad inlet of the ocean, generally extending parallel to the coast." Mississippi Sound (Figure 1) is an elongated basin with its major axis parallel to the Gulf of Mexico from which it is partly separated by a series of barrier islands.

U.S. Coast and Geodetic charts 1266 (1972 edition), 1267 (1972 edition), and 1268 (1974 edition) were used in determining the boundaries of Mississippi Sound. The line segments shown are what the author proposes to be boundaries that are justifiable by definitions, accepted surveying practices and observations of the physical processes within the basin.

The problem of defining the specific limits between two bodies of water is not always a simple one. The solution lies

in finding the exact place where the water bodies merge. The "headland-to-headland" principle (Shalowitz 1964) has been deduced based on consideration of the physical configuration of the water bodies. This principle considers the boundary between a tributary water body and a larger water body to be a line joining the headlands of the tributary water body. The headland rule has been applied in various contexts to bays and rivers.

Two rules (Shalowitz 1964) have been established in the case of determining boundaries where rivers flow directly into a water body. Cognizance has been taken internationally of the headland-to-headland principle at the 1930 Hague Conference for the Codification of International Law. The proviso contained in the final report of the Second Subcommittee of the conference states that "when a river flows directly into the sea, the waters of the river constitute inland waters up to a line following the general direction of the coast drawn across the mouth of the river, whatever its width." The second rule provides that "if a river flows directly into the sea, the baseline shall be a straight line across the mouth of the river between points on the low-tide line of its banks." This rule is a recommendation of the International Law Commission in its final report to the United Nations, as is Article 13 of the 1958 Convention on the Territorial Sea and the Contiguous Zone. The recommendation of the International Law Commission is the convention

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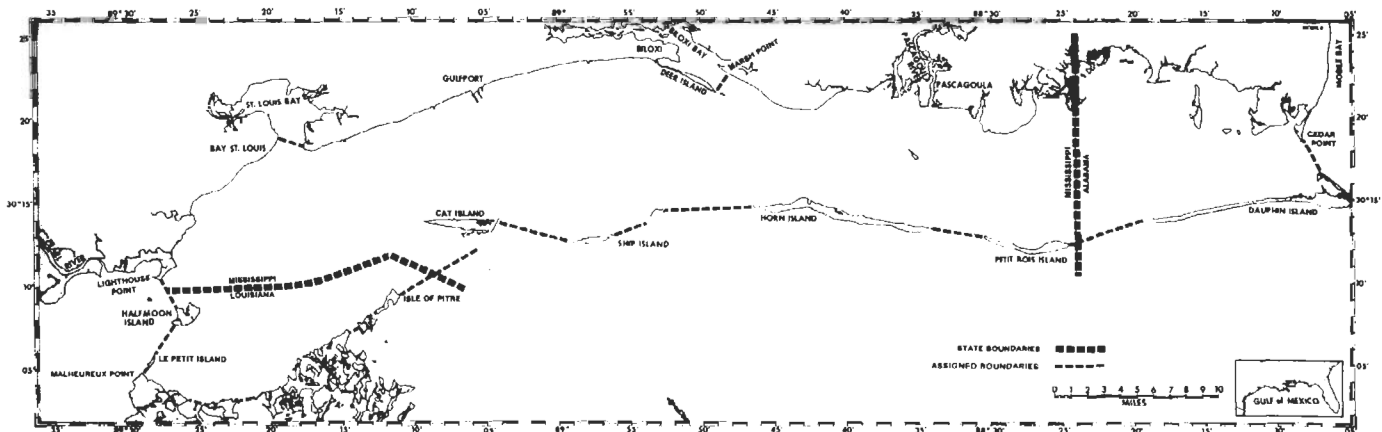


Figure 1. Mississippi Sound showing location of State and natural boundaries.

that was applied here in determining the boundaries between rivers and Mississippi Sound.

A "bay" according to Geneva Convention (Shalowitz 1964) is "a well-marked indentation whose penetration is in such proportion to the width of its mouth as to contain landlocked waters and constitutes more than a mere curvature of the coast. The area of such an indentation must be as large as, or larger than the semicircle whose diameter is a line drawn across the mouth of the indentation." This definition was applied to Mississippi Sound in distinguishing between true bays and those areas erroneously named bays.

The Sound's eastern boundary with Mobile Bay is defined by a line connecting the narrowest point between the Alabama mainland and Dauphin Island. The same convention would be used in determining the boundary between the barrier islands of Dauphin, Petit Bois, Horn, Ship and Cat.

The boundary from Cat Island extends from the south end of the south spit to the Isle Au Pitre. This particular boundary, while somewhat arbitrary, was decided on for two reasons. First, the south spit of Cat Island which continues south-southwest as a submarine topographic feature serves as a line of demarcation with the Gulf of Mexico. Second, the area south of Cat Island Pass is probably more properly labeled a tongue of the Gulf than an extension of Chandeleur Sound and therefore this boundary appears more appropriate than any alternative.

The western boundary of Mississippi Sound is best defined by lines connecting Malheureux Point with Le Petit Island, Le Petit Island with Half Moon Island and Half Moon Island with Light House Point. Malheureux Point was connected with Le Petit Island across the narrowest point of Le Petit Pass. Le Petit Island and Light House Point were connected in a similar manner with Half Moon Island.

These boundaries clearly separate Mississippi Sound from Lake Borgne.

The boundary with St. Louis Bay is across the bay entrance at its narrowest point. The west entrance to Biloxi Bay is denoted by a line projected north to the mainland from the west tip of Deer Island. The Mississippi Sound/Biloxi Bay boundary at the east bay entrance is a line connecting the easternmost tip of Deer Island with the mainland at the nearest point. There were two reasons for not projecting this boundary from Little Deer Island: (1) Sound waters pass freely between it and Deer Island; and (2) it is rapidly disappearing (personal observation) and will not long be available for boundary determination. A line projected across the mouths of Pascagoula River completes the assigned boundaries of Mississippi Sound.

Bays such as Pascagoula, Point Aux Chenes, Grand, Portersville and Heron are not considered separate and distinct water bodies, i.e., true bays, but integral parts of Mississippi Sound. This decision is based on the failure of the areas to qualify as "bays" under the definition of "bay" according to Geneva Convention.

This determination of boundaries provides for the formal geographical definition of Mississippi Sound. The coordinates of latitude and longitude for the assigned boundary lines appear in Table 1. These boundaries are practical in that they are easily remembered and almost as easily located at sea. It is hoped that this geographical definition in clarifying what constitutes "Mississippi Sound" will help end the present confusion.

ACKNOWLEDGMENT

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TABLE 1.
Latitude (N) and longitude (W) of ends of assigned boundaries from east to west.

From	To	From	To
Cedar Point, AL	Dauphin Island, AL	30° 17.1'	88° 7.5'
Dauphin Island	Petit Bois Island, MS	30° 13.9'	88° 19.3'
Petit Bois Island	Horn Island	30° 12.8'	88° 30.4'
Horn Island	Ship Island	30° 14.6'	88° 46.5'
Ship Island Cut (Camille Cut)		30° 13.8'	88° 53.6'
Ship Island	Cat Island	30° 12.6'	88° 59.2'
Cat Island	Isle Au Pitre	30° 10.8'	89° 6.8'
Le Petit Island	Malheureux Point	30° 4.8'	89° 28.6'
Half Moon Island	Le Petit Island	30° 7.6'	89° 26.6'
Half Moon Island	Light House Point	30° 8.8'	89° 26.7'
Narrows of Entrance	St. Louis Bay	30° 18.4'	89° 17.6'
Deer Island (west)	Biloxi (mainland)	30° 21.1'	88° 53.0'
Marsh Point (mainland)	Deer Island (east)	30° 20.3'	88° 47.9'
Creole Gap (LA marsh)		30° 8.5'	89° 12.7'
Grand Pass (LA marsh)		30° 7.7'	89° 14.0'
Three-Mile Pass		30° 3.1'	89° 21.4'
Kennedy Lagoon (LA marsh)		30° 3.0'	89° 25.3'
Blind Bay (LA marsh)		30° 2.8'	89° 24.5'
			30° 18.6'
			88° 8.2'
			30° 12.3'
			88° 24.4'
			30° 13.3'
			88° 33.9'
			30° 14.6'
			88° 52.3'
			30° 13.0'
			88° 56.1'
			30° 14.2'
			89° 4.0'
			30° 9.5'
			89° 11.0'
			30° 5.1'
			89° 29.0'
			30° 5.9'
			89° 28.1'
			30° 10.4'
			89° 27.7'
			30° 18.6'
			89° 19.5'
			30° 21.1'
			88° 53.1'
			30° 19.2'
			88° 48.9'
			30° 8.2'
			89° 13.2'
			30° 7.3'
			89° 14.7'
			30° 2.9'
			89° 22.2'
			30° 3.1'
			89° 25.8'
			30° 3.0'
			89° 25.3'

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