

Statewide Summary for Louisiana

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Background

Although wigeon grass (*Ruppia maritima*) is common all along coastal Louisiana, true seagrass meadows containing turtle grass (*Thalassia testudinum*), manatee grass (*Syringodium filiforme*), shoal grass (*Halodule wrightii*), and star grass (*Halophila englemannii*) currently occur only east of the Mississippi River near the Chandeleur Islands (fig. 1). The bays west of the Chandeleur Island chain provide clear, high-salinity, and low-nutrient waters appropriate for seagrass growth. Conversely, barrier island bays west of the Mississippi River are characterized by high turbidity, low salinity, and high nutrient levels, providing marginal seagrass habitat. Montz (1977) reported seagrass beds in the backbays of barrier islands west of the Mississippi River. In studies conducted in 1974 and 1975, he found that shoal grass and wigeon grass were abundant and suggested that other species might be present. Based on helicopter observations by Suzanne Hawes in January 1976, submerged vegetation coverage was estimated to be 53 ha (130 acres) north of East Timbalier Island, 121 ha (300 acres) north of Timbalier Island, and 111 ha (275 acres) north of Isles Dernieres (Montz, 1977). No submerged vegetation, including wigeon grass, however, was found during boat surveys of Timbalier Island conducted in October 2003 and seaplane surveys of Timbalier Island and Isles Dernieres conducted in July 2004 by Carol Franze and Michael Poirrier.

Although total species composition is unknown, the disappearance of 285 ha (705 acres) of submerged vegetation represents a significant loss of habitat and biodiversity. Loss of submerged vegetation west of the Mississippi River may be due in part to the natural deterioration of deltaic marshes and shores; however, these natural processes have been exacerbated by the activities of humans such as dredging of navigation canals; land reclamation; flood control; subsurface withdrawal of oil, gas, and water; and ironically in some instances, restoration. For instance, deposition of dredged material as a method to restore western barrier islands causes increased turbidity and may have been a significant cause of seagrass decline.

Seagrasses help support the geologic integrity of barrier islands by stabilizing sediments and the biologic integrity by

providing essential invertebrate, fish, and waterfowl habitat. Seagrass meadows in Chandeleur Sound provide habitat that does not occur elsewhere in Louisiana. Seagrasses enhance biodiversity and provide refuge for unique populations of commercial, rare, and endangered species. The islands also serve as the first line of defense against coastal land loss from hurricanes for southeastern Louisiana and the highly populated New Orleans area. They are also an intrinsic part of the lower Pontchartrain Basin and an essential component of the Lake Pontchartrain estuarine system. The loss of Chandeleur seagrasses would cause further degradation of and hamper restoration efforts in Lake Pontchartrain and the lower Pontchartrain Basin.

Statewide Status and Trends

At present, Louisiana seagrasses are limited to shoals west of the Chandeleur Islands. Unfortunately, the only statement that can be made about East Timbalier and Timbalier Islands and Isles Dernieres seagrasses is that whatever species were present no longer occur there. Therefore, the discussion of Louisiana seagrasses including statewide status and trends, causes of change, data gaps and monitoring, restoration, and enhancement activities is restricted to the Chandeleur Islands.

Reference Cited

Montz, G.N., 1977, A vegetational study of the Timbalier and Isles Dernieres barrier islands: Louisiana Academy of Sciences, v. 40, p. 59–69.

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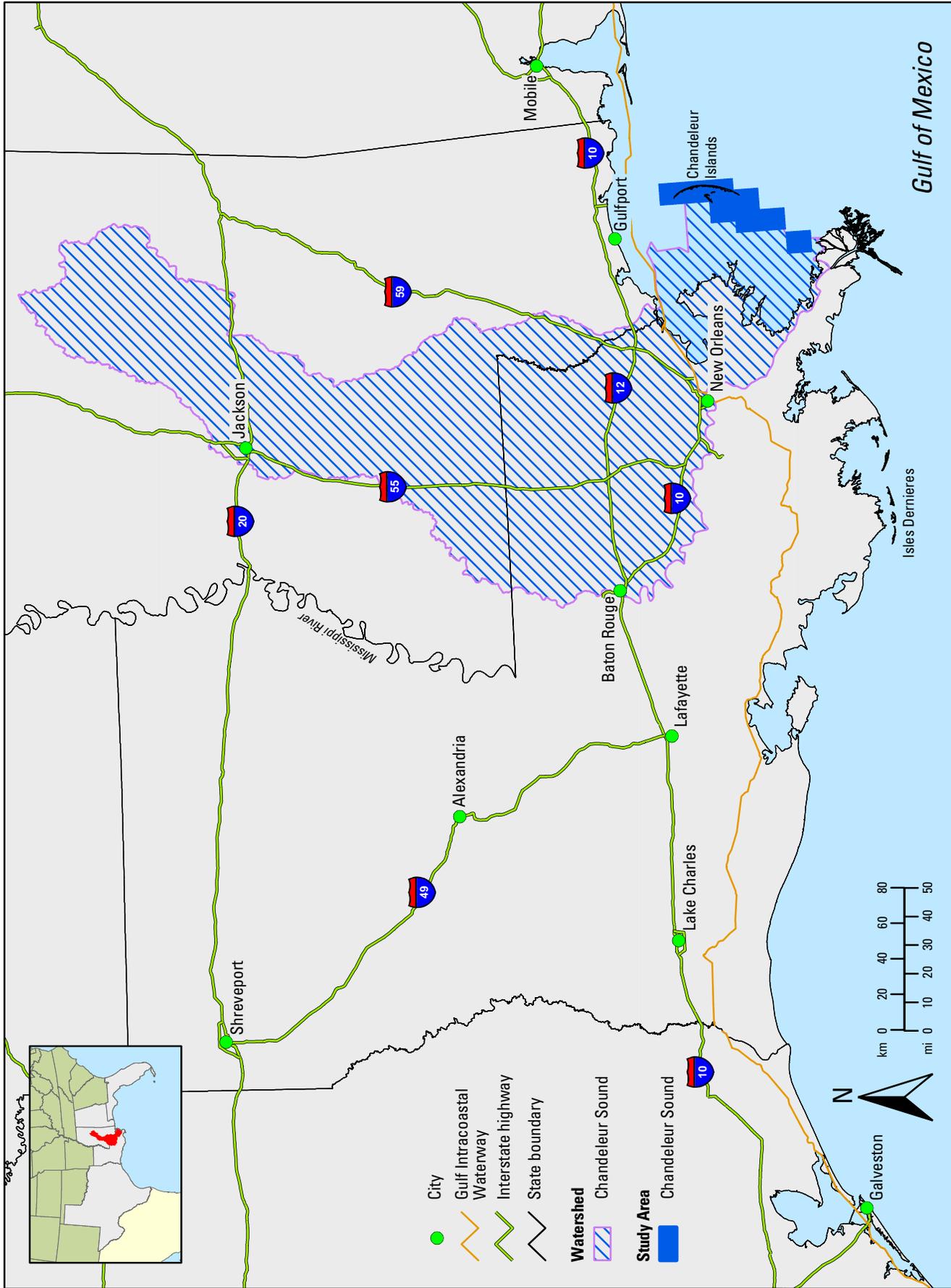


Figure 1. Watershed for the State of Louisiana.