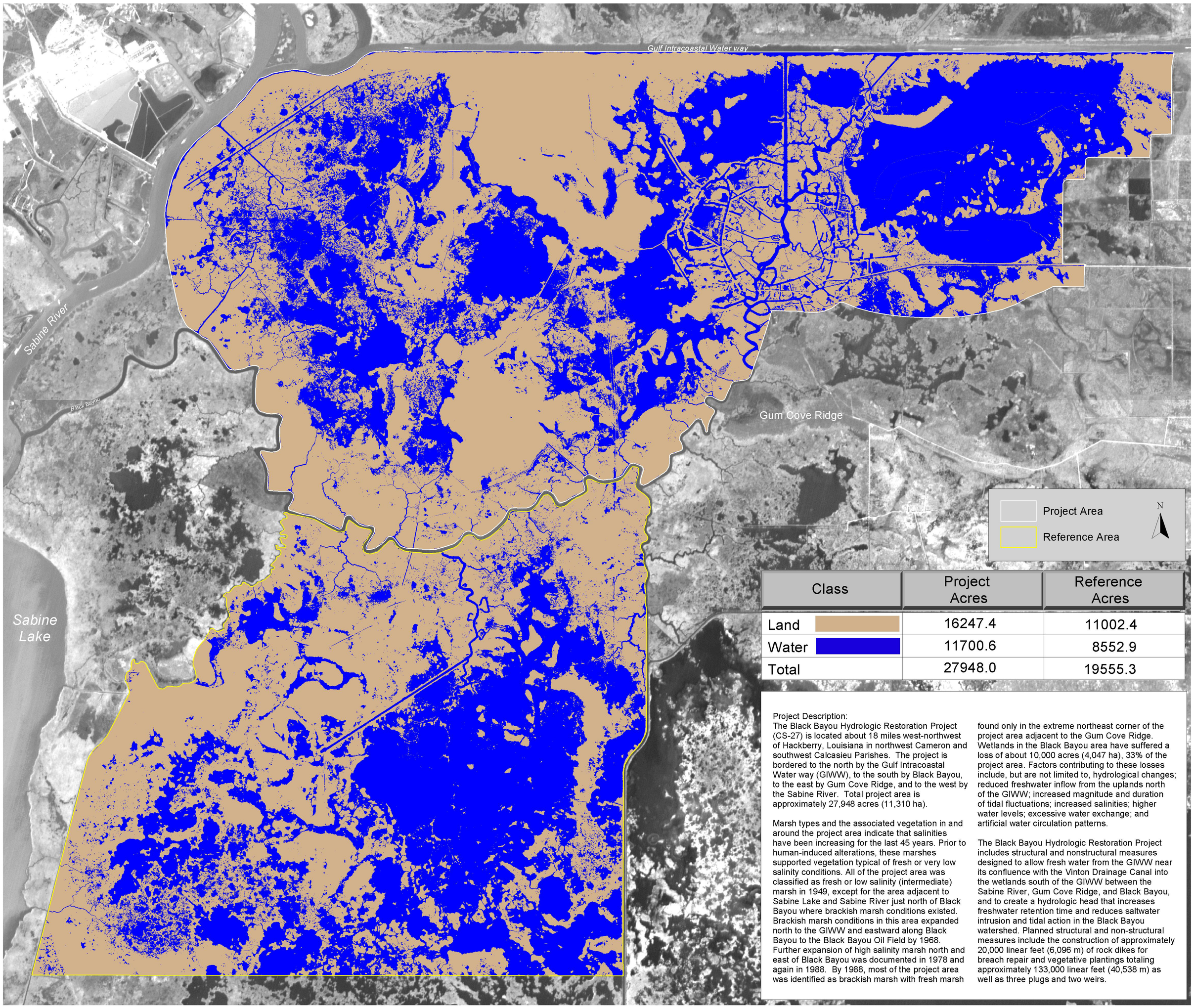
Black Bayou Hydrologic Restoration (CS-27)

Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA)

2000 Land-Water Analysis



Class	Project Acres	Reference Acres
Land	16247.4	11002.4
Water	11700.6	8552.9
Total	27948.0	19555.3

Project Description:
The Black Bayou Hydrologic Restoration Project (CS-27) is located about 18 miles west-northwest of Hackberry, Louisiana in northwest Cameron and southwest Calcasieu Parishes. The project is bordered to the north by the Gulf Intracoastal Water way (GIWW), to the south by Black Bayou, to the east by Gum Cove Ridge, and to the west by the Sabine River. Total project area is approximately 27,948 acres (11,310 ha).

Marsh types and the associated vegetation in and around the project area indicate that salinities have been increasing for the last 45 years. Prior to human-induced alterations, these marshes supported vegetation typical of fresh or very low salinity conditions. All of the project area was classified as fresh or low salinity (intermediate) marsh in 1949, except for the area adjacent to Sabine Lake and Sabine River just north of Black Bayou where brackish marsh conditions existed. Brackish marsh conditions in this area expanded north to the GIWW and eastward along Black Bayou to the Black Bayou Oil Field by 1968. Further expansion of high salinity marsh north and east of Black Bayou was documented in 1978 and again in 1988. By 1988, most of the project area was identified as brackish marsh with fresh marsh found only in the extreme northeast corner of the project area adjacent to the Gum Cove Ridge. Wetlands in the Black Bayou area have suffered a loss of about 10,000 acres (4,047 ha), 33% of the project area. Factors contributing to these losses include, but are not limited to, hydrological changes; reduced freshwater inflow from the uplands north of the GIWW; increased magnitude and duration of tidal fluctuations; increased salinities; higher water levels; excessive water exchange; and artificial water circulation patterns.

The Black Bayou Hydrologic Restoration Project includes structural and nonstructural measures designed to allow fresh water from the GIWW near its confluence with the Vinton Drainage Canal into the wetlands south of the GIWW between the Sabine River, Gum Cove Ridge, and Black Bayou, and to create a hydrologic head that increases freshwater retention time and reduces saltwater intrusion and tidal action in the Black Bayou watershed. Planned structural and non-structural measures include the construction of approximately 20,000 linear feet (6,096 m) of rock dikes for breach repair and vegetative plantings totaling approximately 133,000 linear feet (40,538 m) as well as three plugs and two weirs.

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Project Location:

Scale = 1: 27,000

1 0 1 2 3 Miles

2 0 2 4 Kilometers

Data Source:
Land-Water analysis derived from 1:24,000 scale color-infrared photography obtained November 22, 2000. The land-water data is overlaid on to a 1993 panchromatic SPOT image at 1: 27,000 scale.

Federal Sponsor:
National Marine Fisheries Service

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