

Figure 6  
1989 Wetlands of Dickinson Bay

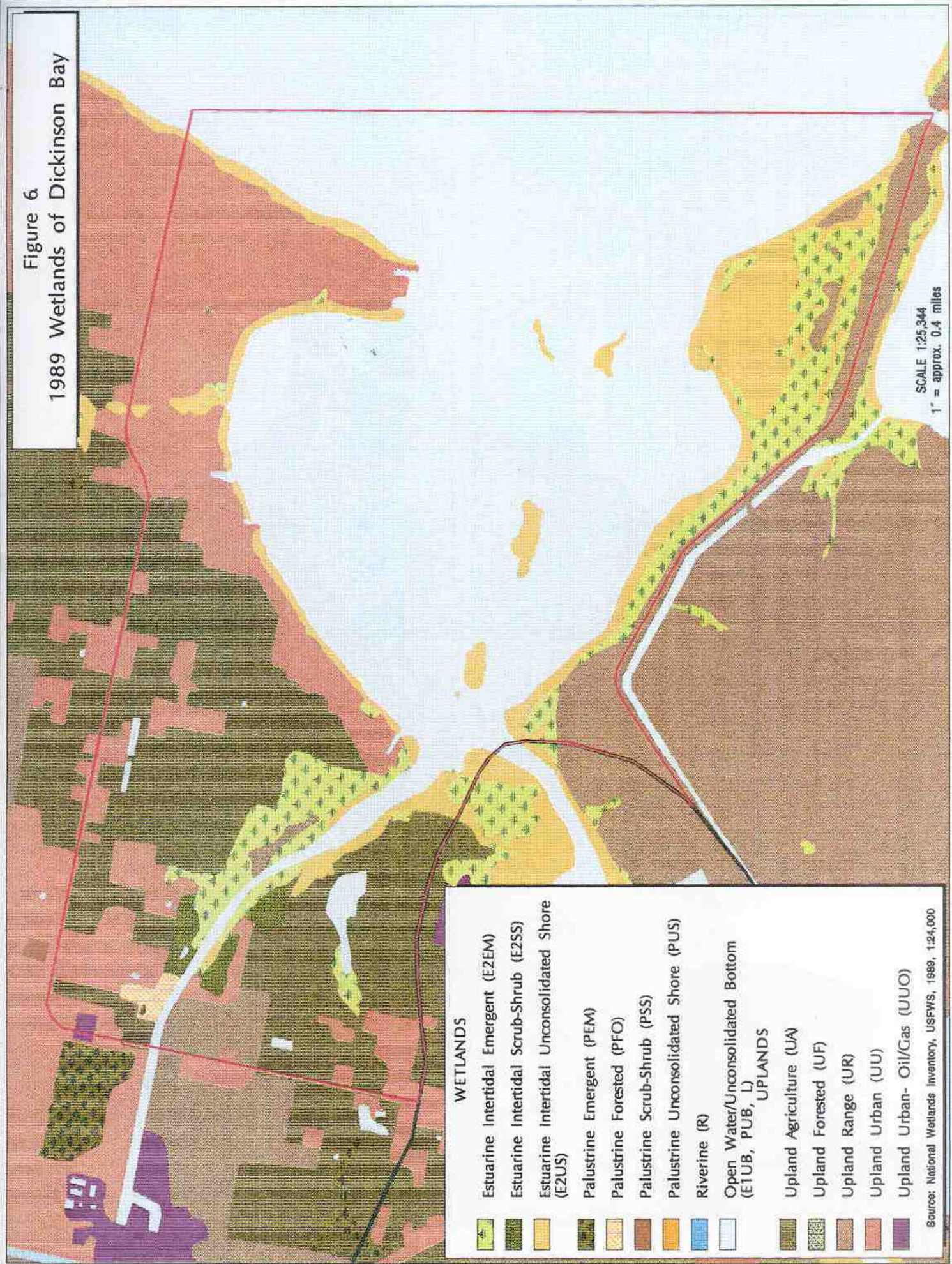




Figure 7.

1952 Wetlands of the Dickinson Bayou Watershed

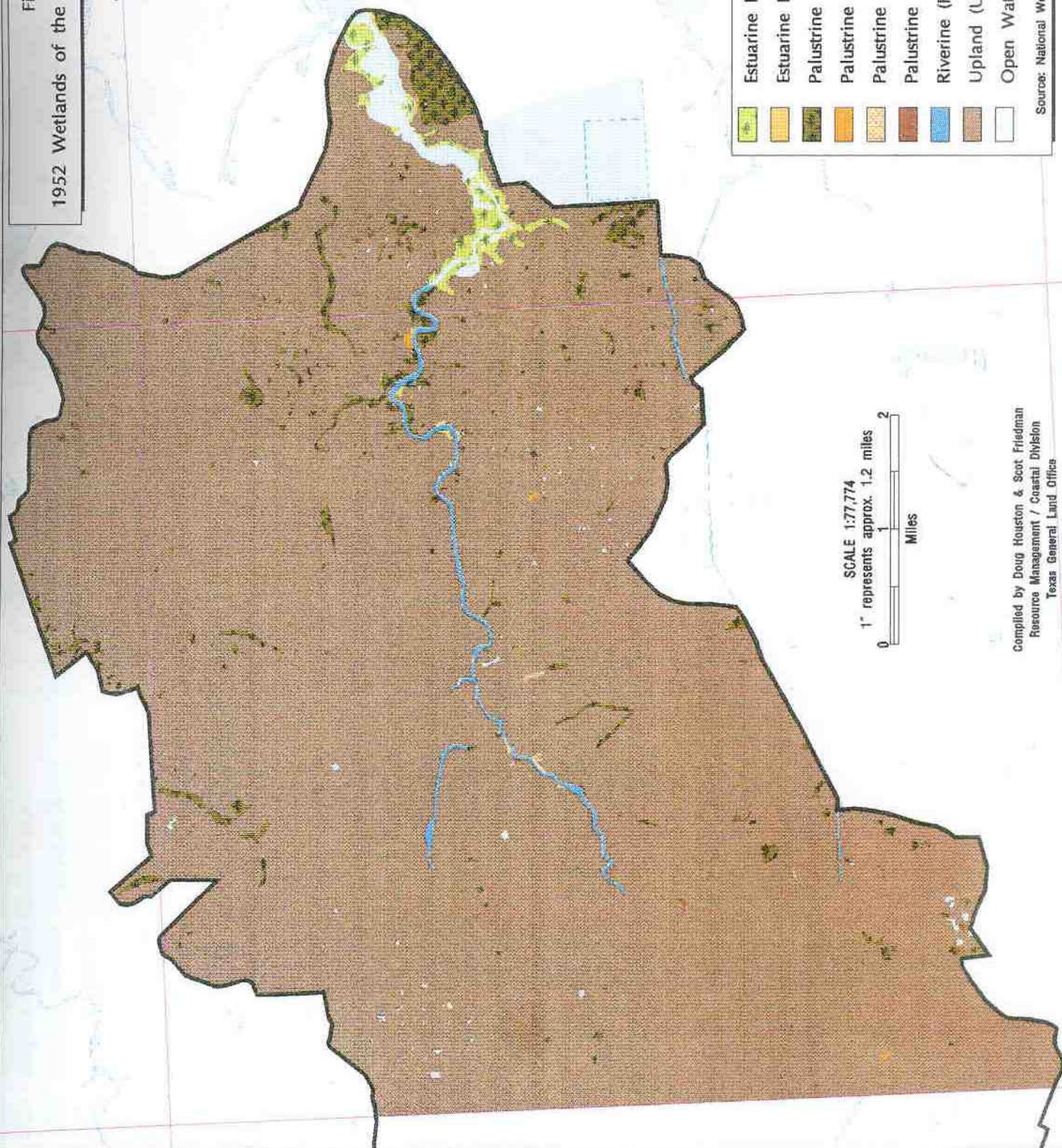
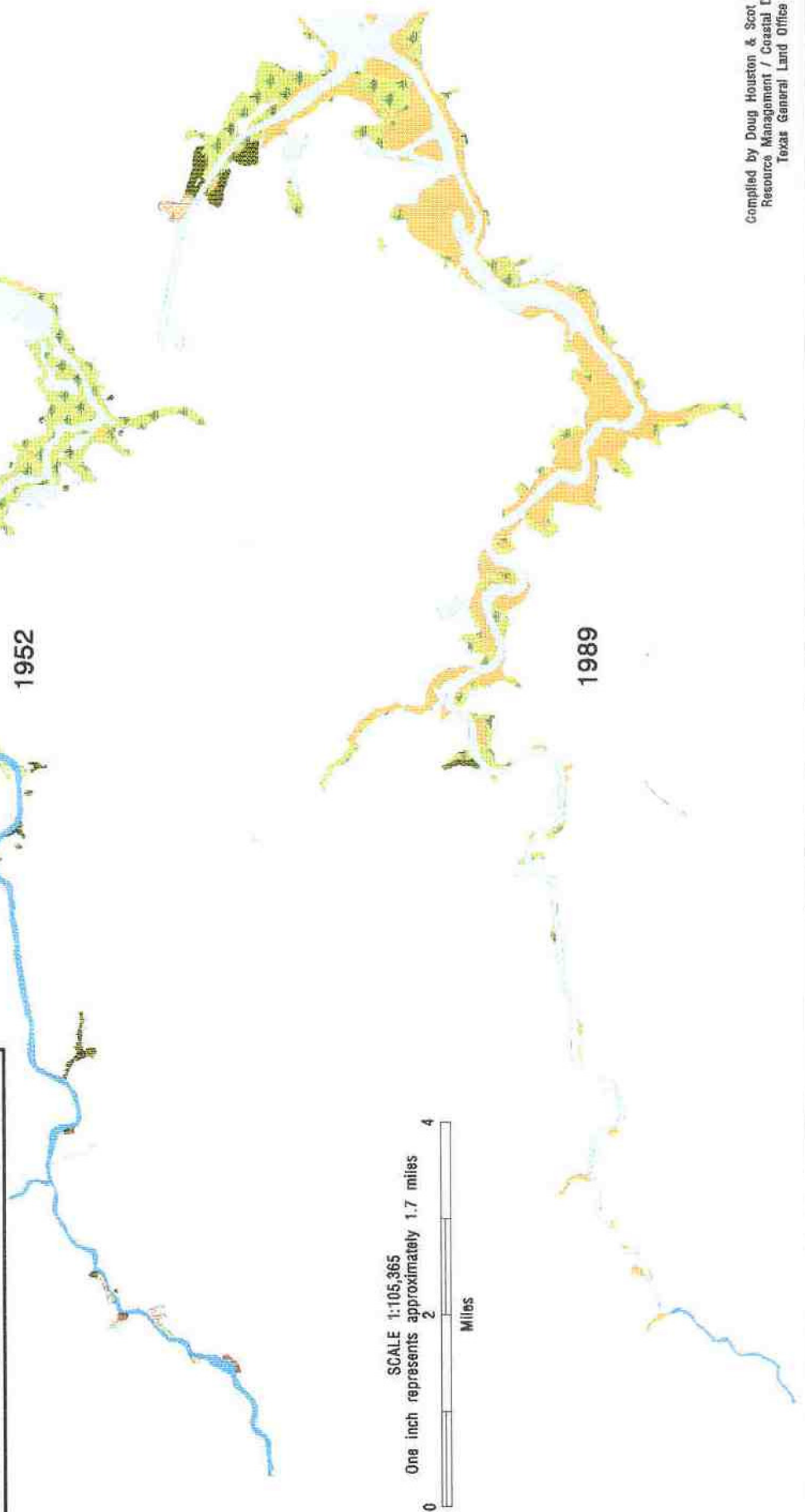
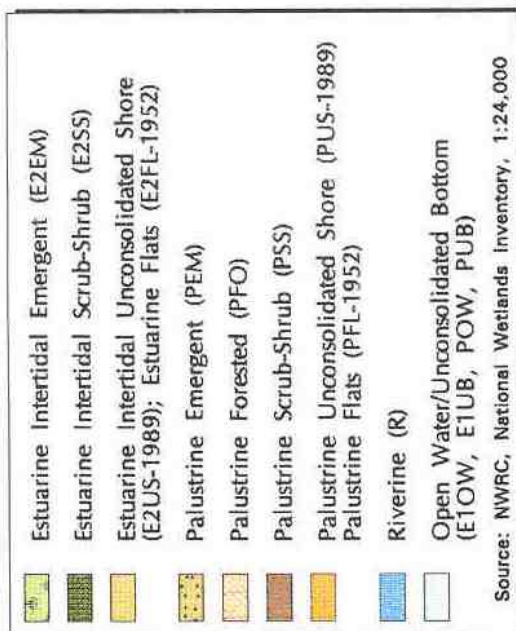




Figure 8.  
Dickinson Bayou Shoreline Wetlands  
1952 - 1989



resource. Losses of palustrine emergent wetlands were due primarily to conversion to uplands and changes to scrub-shrub vegetation.

Wetlands in the Dickinson Bay area also decreased dramatically, from approximately 966 acres in 1952 to 308 acres in 1989, or a 68 percent loss in wetlands (table 4; figs. 6 and 9). Palustrine emergent wetlands, or fresh marshes, experienced the biggest decline--from about 571 acres in 1952 to less than one acre in 1989. Most of the loss in fresh marsh occurred in an area between Dickinson Bay and Moses Lake east of the Galveston County Industrial Water Reservoir. Estuarine emergent wetlands fringing Dickinson Bay decreased by only about 8 acres between 1952 and 1989.

Relative sea-level rise, primarily from man-induced subsidence, has been responsible for the conversion of many of the emergent or vegetated wetlands to open water and barren flats in the Dickinson Bay and Bayou area. Wetlands are very sensitive to the effects of water-level change (Kusler et al., 1994). White et al. (1993) found that about 30 percent of the total wetland loss in the Galveston Bay system was from subsidence. Other possible causes of wetland loss or degradation are drainage for crop production and expansion of upland rangeland; dredging and stream channelization for navigation; filling for shoreline structures, roads and highways, and commercial, residential, and industrial development; point- and nonpoint-source pollution; and hydrologic alterations by canals, spoil banks, roads, and other structures.

## WETLAND RESTORATION AND CREATION

### Dickinson Bay

#### Goal

The goal of the wetland restoration/creation project for Dickinson Bay is to create a salt marsh similar to adjacent natural salt marshes that functions as both fish and wildlife habitat and provides shoreline stabilization.

#### Site descriptions

Potential wetland restoration or creation sites were surveyed along the shoreline of Dickinson Bay. Urbanization limits opportunities for marsh restoration or creation along the northern bay shoreline. Along the southwestern bay shoreline, fringing intertidal marshes of Spartina alterniflora in small patches less than 20 m in width occur between unvegetated areas of intertidal mudflats. Small fringing marshes are located just bayward of erosional interbedded clay and sand bluffs that become steeper and more prominent southeast of the fringing marshes.



Figure 9.  
1952 Wetlands of Dickinson Bay

