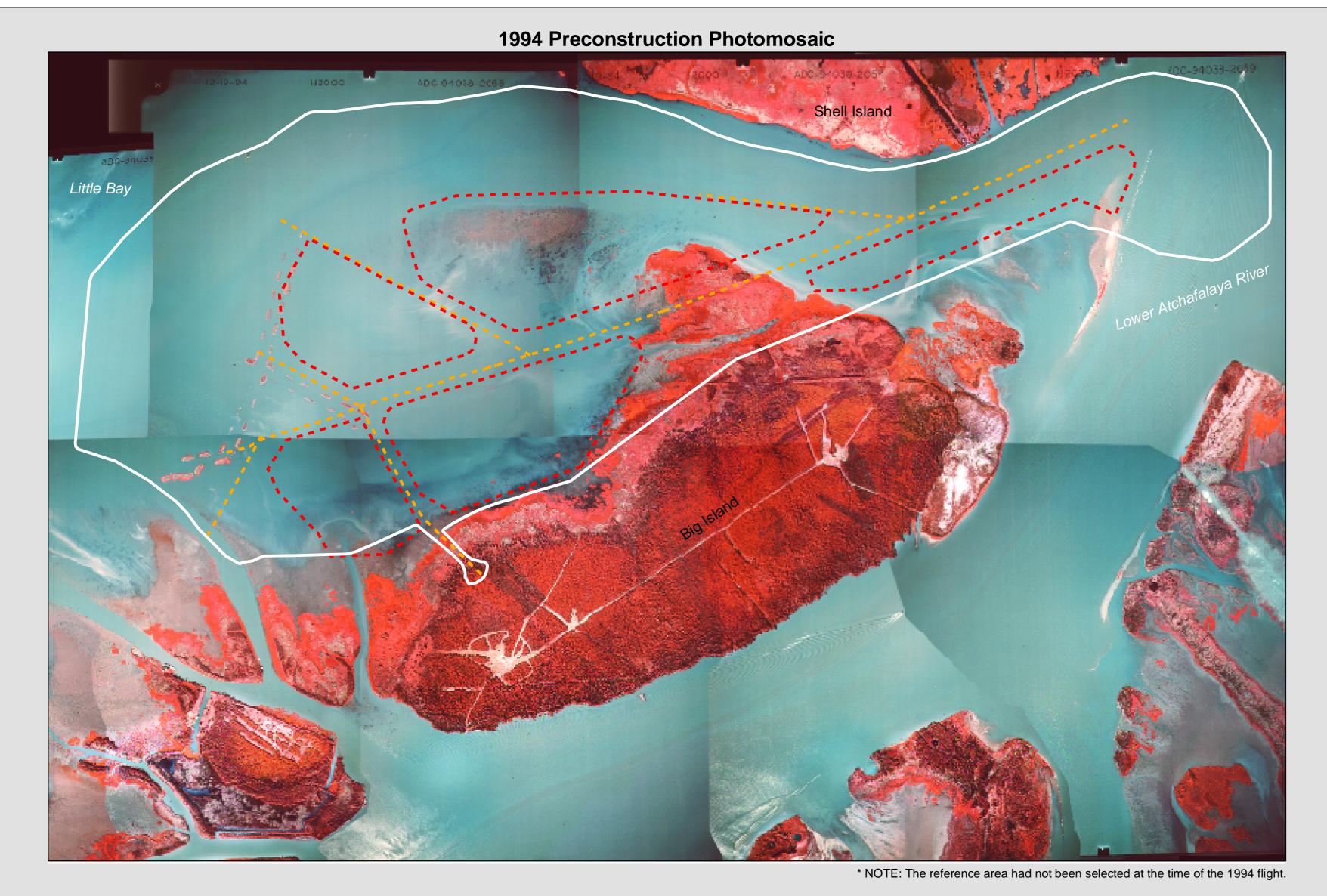


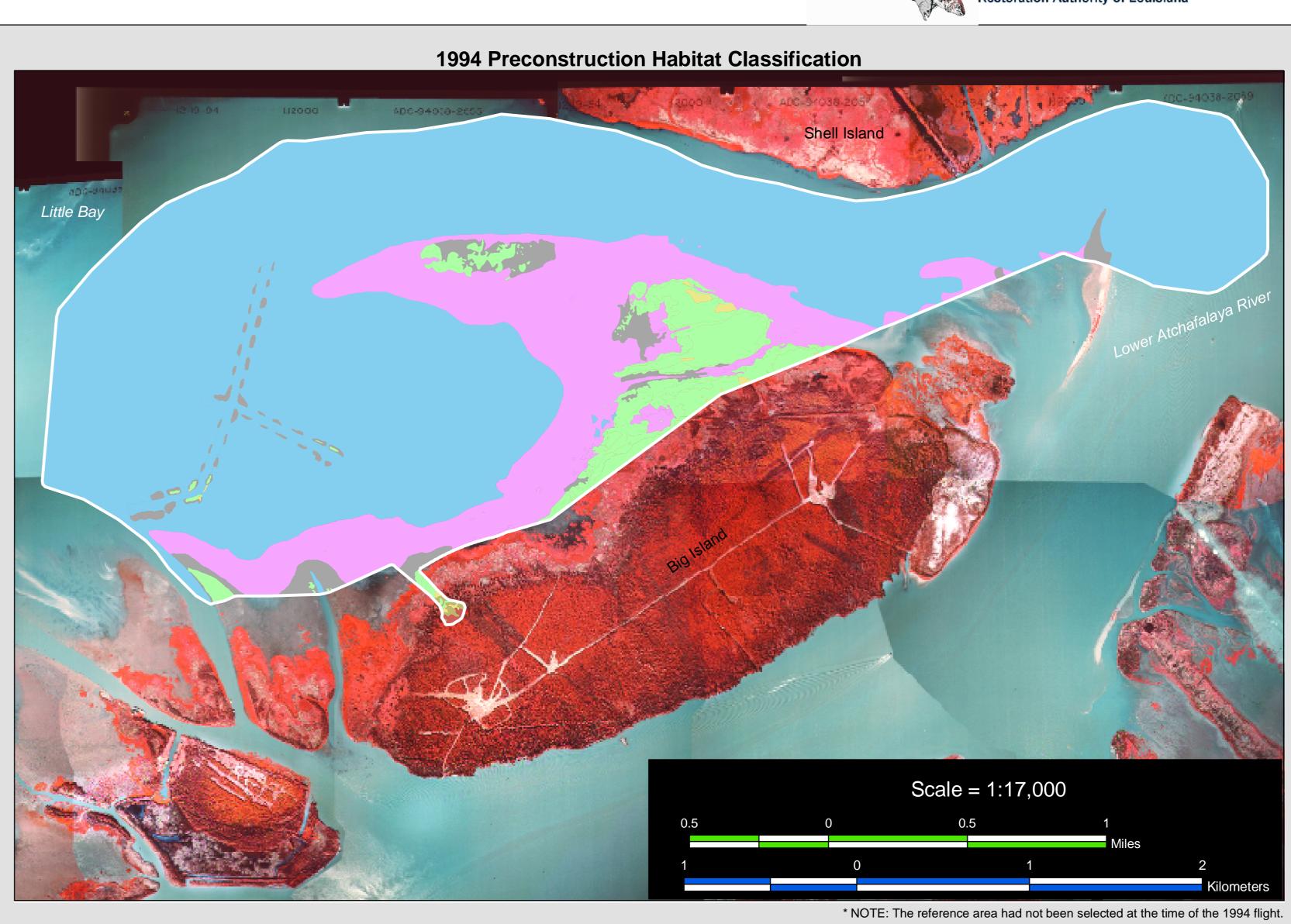
Big Island Mining (AT-03)
Coastal Wetlands Planning, Protection and Restoration Act
1994, 1997, 1998, 2000, and 2007 Habitat Classification

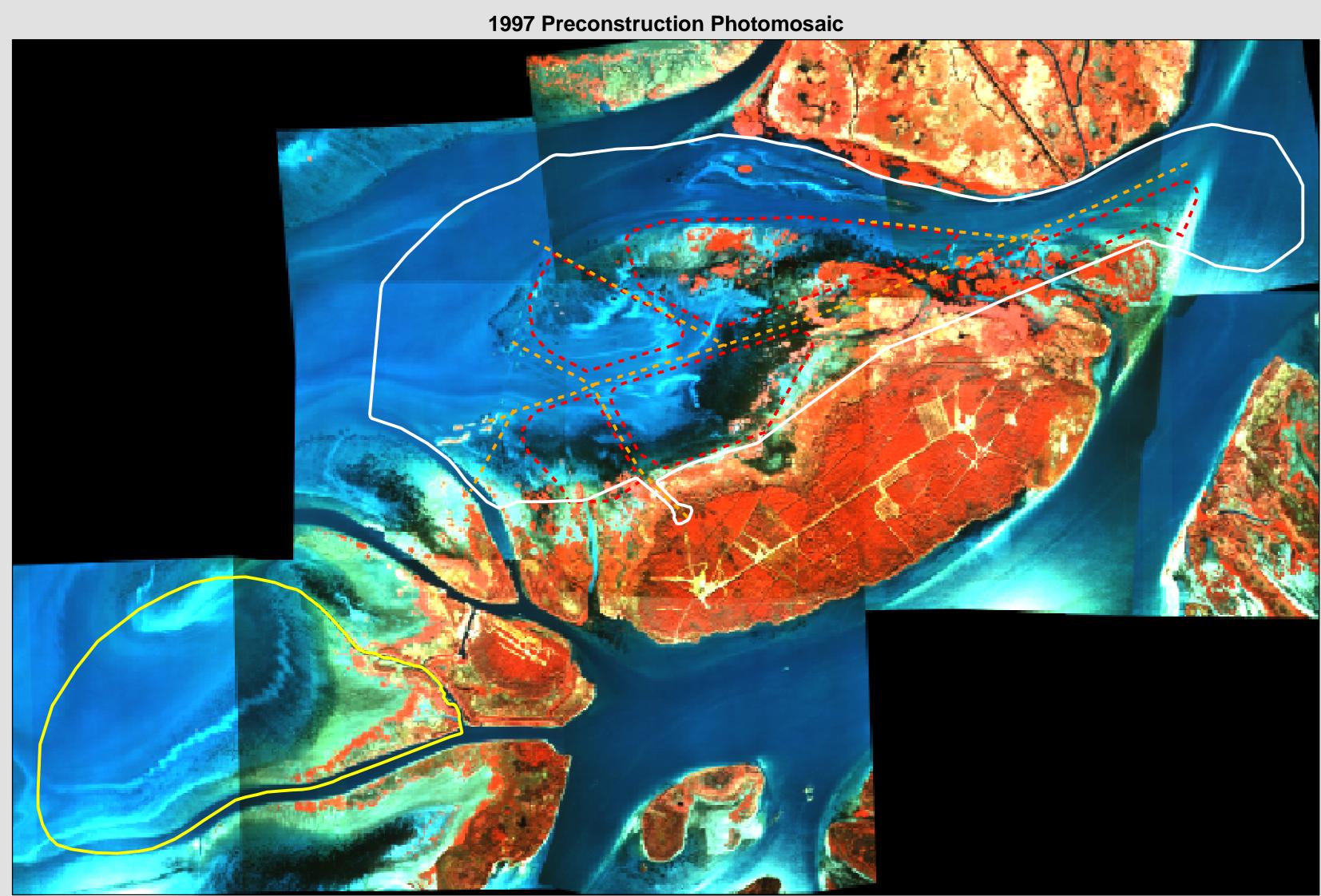




### **Project Description**

The Big Island Mining project is located in the north-western region of the Atchafalaya River delta and is bounded by Shell Island to the north and the Lower Atchafalaya River to the east and southeast. The project is located within the Louisiana Atchafalaya Delta Wildlife Management Area in the southeastern corner of St. Mary Parish, La. The Atchafalaya River delta is bisected by the Lower Atchafalaya River, which is annually dredged by the U.S. Army Corps of Engineers for navigational purposes. The continually increasing channel depth, combined with dredged material deposition along the channel banks, has created an efficient conduit for river sediment to the Gulf of Mexico. Dredged material deposited along the western portion of the navigation channel formed Big Island. The of the navigation channel formed Big Island. The project is enhancing natural delta building processes by creating an avenue for sediment transport to areas north and west of Big Island. The project consists of dredging a 21,000 ft (64,000 m) secondary distributary channel from the Lower Atchafalaya River along the northern side of Big Island, with four smaller, tertiary distributary channels to emulate an emerging delta. The main distributary channel starts with a bottom width of 800 ft (244 m) at National Geodetic Vertical Datum (NGVD) elevation -20.0 ft (-6.1 m) and reduces to 400 ft (122 m) bottom width at NGVD elevation -10 ft (-3 m) to create a venturi effect to accelerate flow and keep sediment in suspension. A total of 3.34 million cubic yd (2.54 million cubic m) of dredged material was placed in 5 dredge disposal areas at NGVD elevations between +3.0 ft and +1.50 ft (+0.9 and +.45 m). The dredging and the placement of the material began on January 25, 1998 and ended on October 8, 1998.





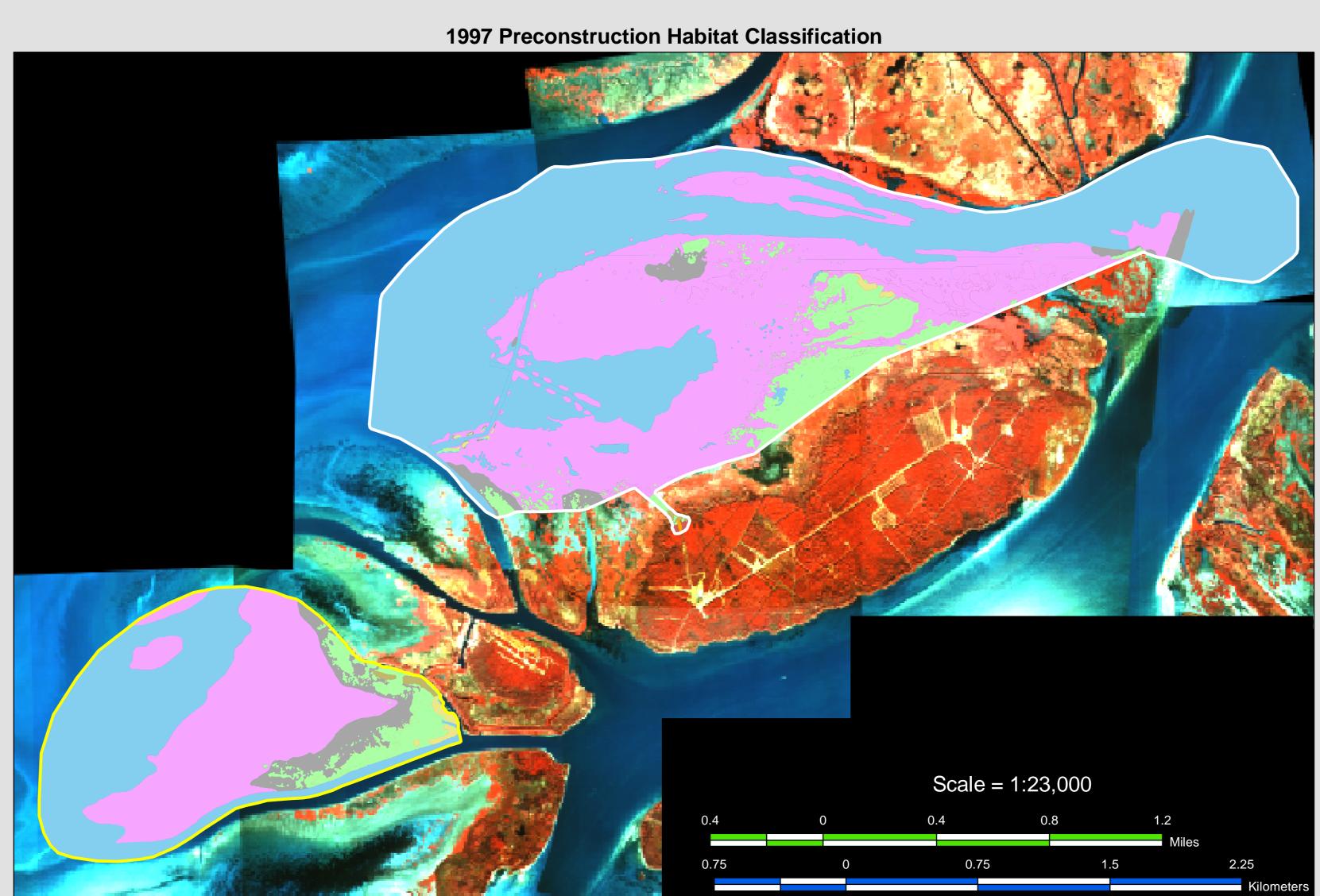
### **Project Features** Project Area

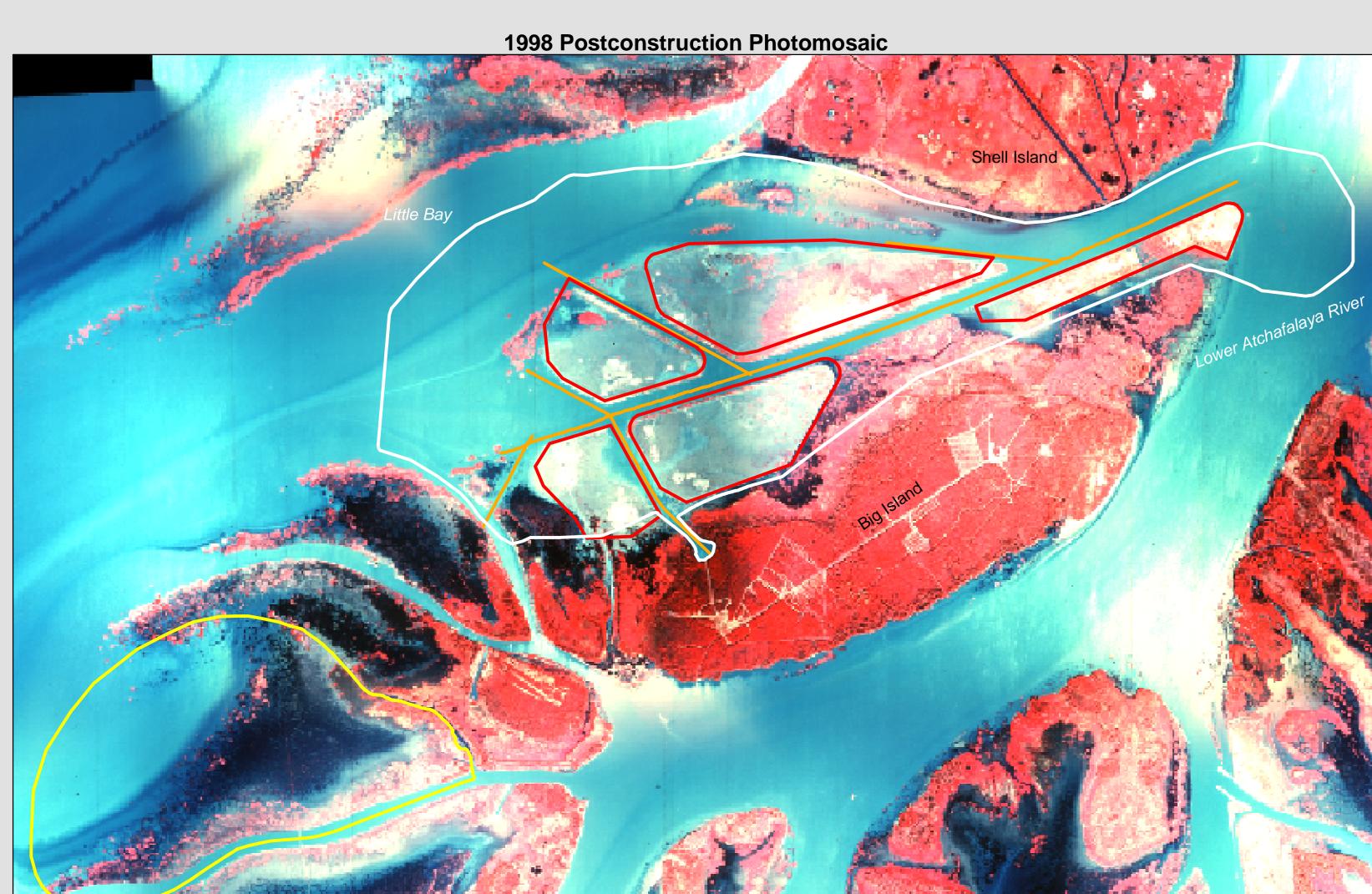
Reference Area Future Dredged Channels Future Disposal Areas Dredged Channels

# Disposal Areas **Habitat Classes** Agriculture/Range

Fresh Marsh Open Water - Fresh Submerged Aquatics Upland Barren Upland Scrub-Shrub Wetland Forested Wetland Scrub-Shrub

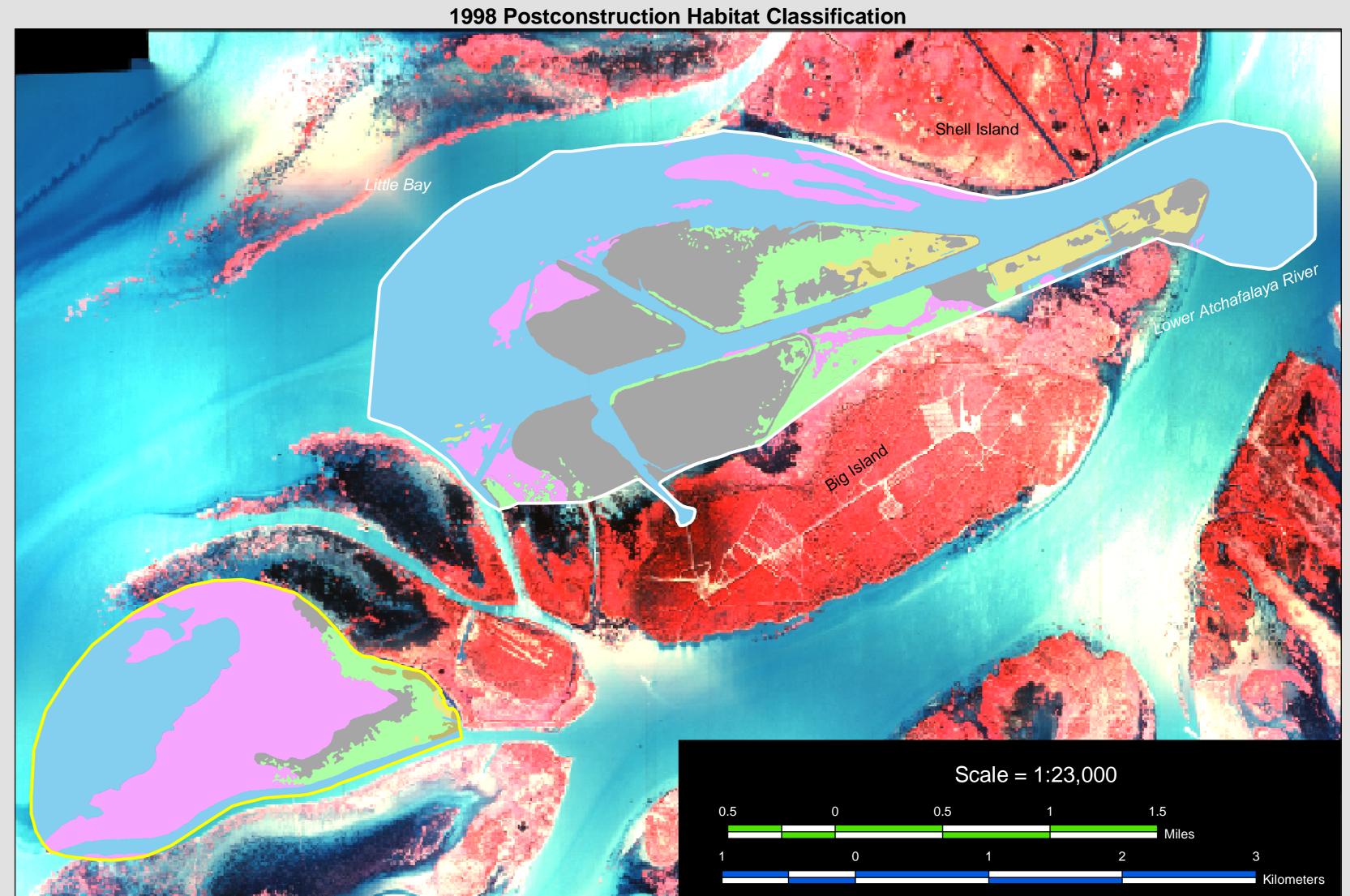
Beach/Bar/Flat





## **Project Area Acreages**

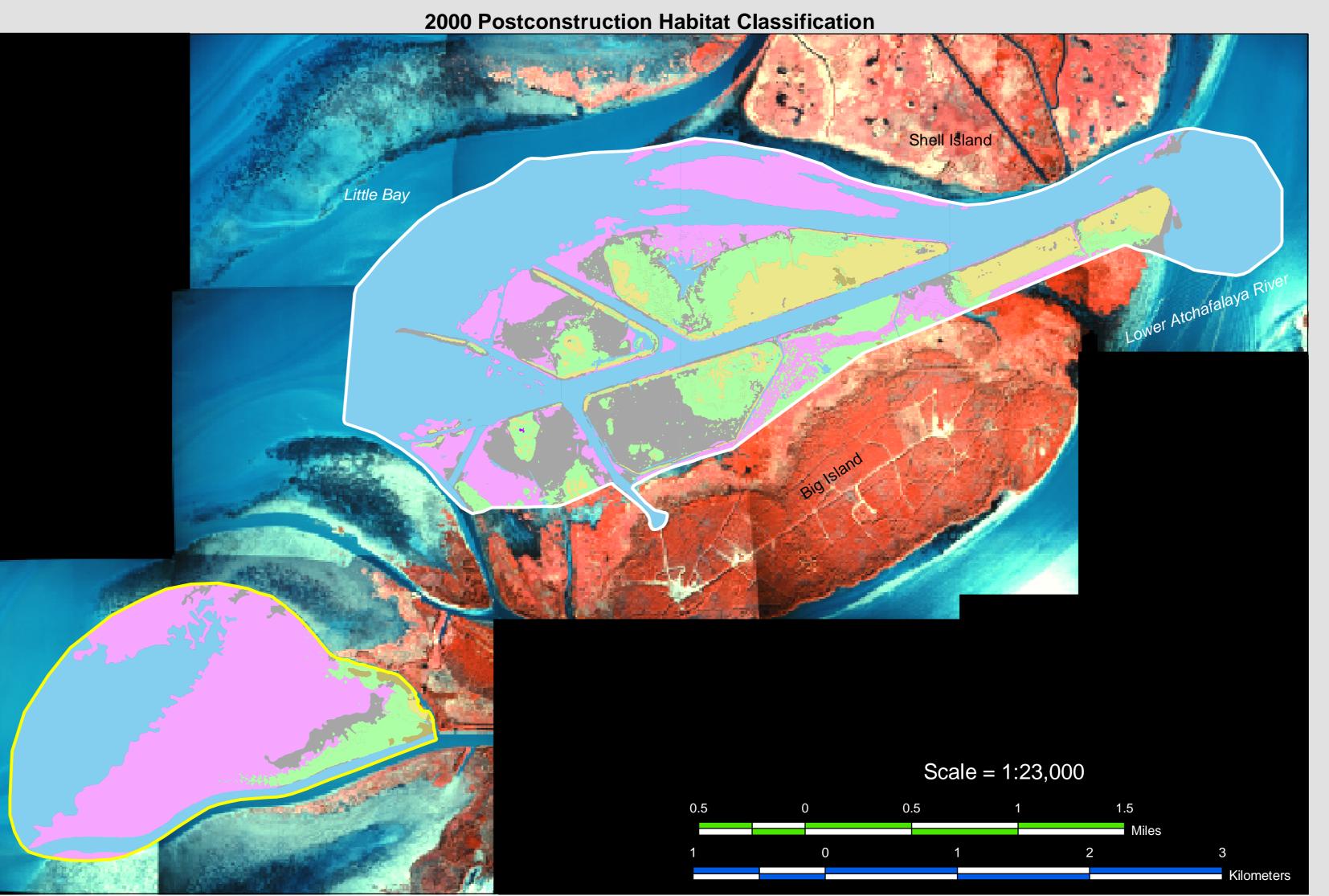
Habitat Class	1994	1997	1998	2000	2007
Agriculture/Range	0	1	1	0	0
Beach/Bar/Flat	77	55	726	350	280
Fresh Marsh	155	196	247	372	628
Open Water - Fresh	2,036	1,388	1,439	1,318	1,266
Submerged Aquatics	488	1,116	239	464	373
Upland Barren	0	0	0	1	<1
Upland Scrub-Shrub	2	2	0	1	0
Wetland Forested	2	2	2	2	175
Wetland Scrub-Shrub	5	5	111	257	43
TOTAL	2,765	2,765	2,765	2,765	2,765



2000 Postconstruction Photomosaic	E
	F
	C
Shell Island	5
	L
	L
	V
hafalaya River	V
Lower Atchafalaya River	1
Big Island	

Reference Area Acreages									
Habitat Class	1994	1997	1998	2000	2007				
Agriculture/Range	N/A	0	0	0	0				
Beach/Bar/Flat	N/A	79	48	34	428				
Fresh Marsh	N/A	79	90	71	176				
Open Water - Fresh	N/A	437	394	375	404				
Submerged Aquatics	N/A	447	510	561	14				
Upland Barren	N/A	0	0	0	0				
Upland Scrub-Shrub	N/A	0	0	0	0				
Wetland Forested	N/A	5	9	10	13				
Wetland Scrub-Shrub	N/A	7	3	3	22				
TOTAL	N/A	1,054	1,054	1,054	1,057				

NOTE: At the time of the 1994 flight, the reference area had not been selected.









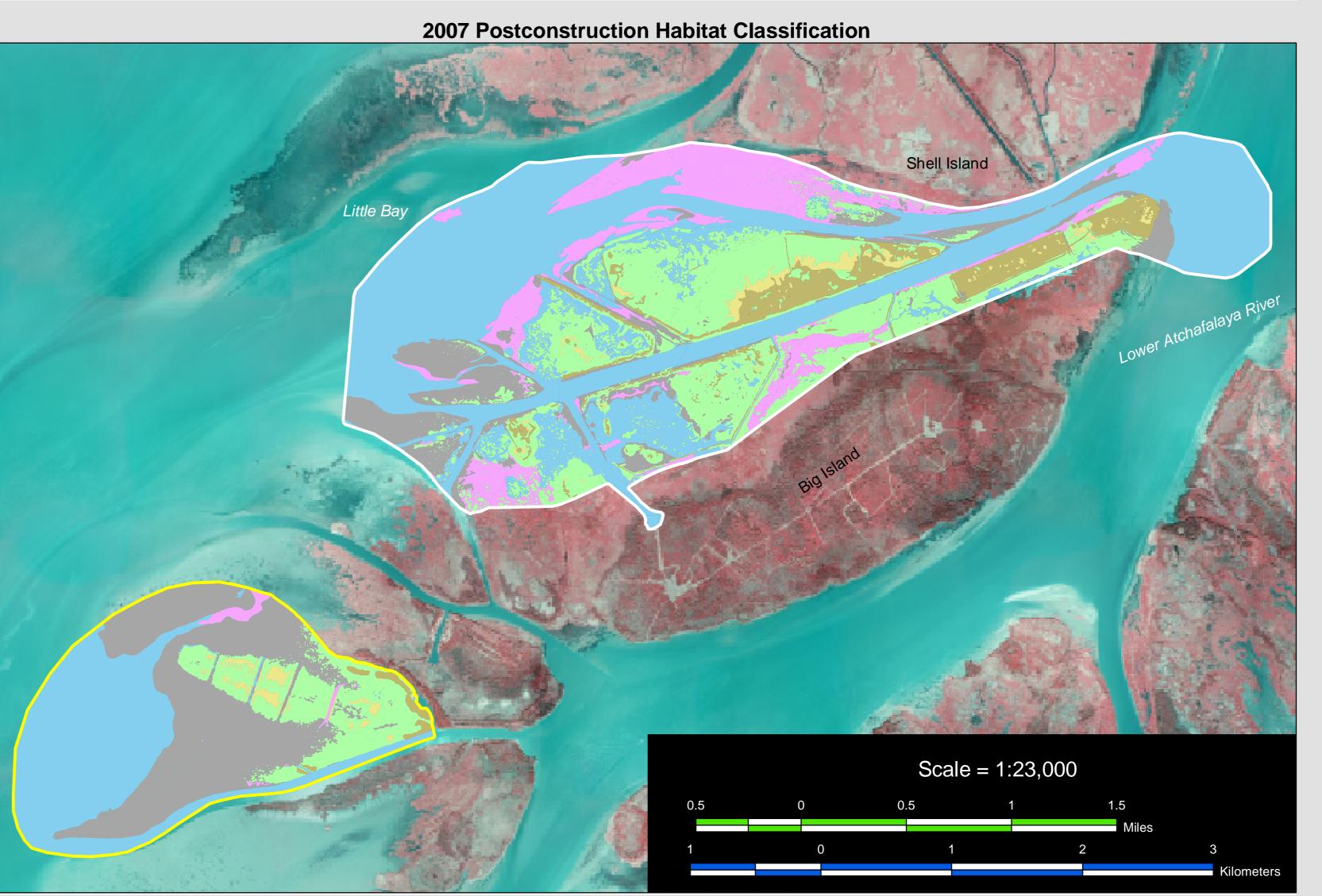
## Data Source

The 1994 preconstruction habitat data were derived from 1:12,000 scale, color-infrared aerial photography acquired on December 19, 1994. The postconstruction habitat data of 1998 were derived from 1:40,000 scale, color-infrared photography obtained November 3, 1998. The postconstruction habitat data of 2000 were derived from 1:12,000 scale, color-infrared photography obtained November 15, 2000. The postconstruction habitat data of 2007 were derived from 1:12,000 scale, color-infrared photography obtained October 29, 2007. Habitat classes are based on "Classification of Wetlands and December Habitate of the United States" (Couverdin and others Deepwater Habitats of the United States" (Cowardin and others 1979, FWS/OBS- 79/31) as modified for the National Wetlands Inventory mapping conventions. Uplands were aggregated from the Anderson classification scheme (Anderson et al., 1976; USGS, 1992).

Prepared by: U.S. Department of the Interior U.S. Geological Survey
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Coastal Protection and Restoration Authority of Louisiana Office of Coastal Protection and Restoration Thibodaux Field Office





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