BENEFICIAL USE OF DREDGED MATERIAL DISPOSAL HISTORY
ATCHAFALAYA RIVER AND BAYOUS CHENE, BOEUF AND BLACK, LA
ATCHAFALAYA BAY AND BAR

The Rivers and Harbors Act of 25 June 1910 authorized the USACE, New Orleans District (CEMVN) to construct and maintain the Atchafalaya River, Morgan City to the Gulf of Mexico, Louisiana, project which provided a navigation channel 20 feet deep, 200 feet wide and 15.75 miles long from the 20 foot contour in the Atchafalaya Bay, approximately 4 miles beyond the mouth of the Atchafalaya River, to the 20 foot contour in the Gulf of Mexico. Traffic sufficient to warrant maintenance of the authorized navigation channel to full project dimensions did not immediately develop. The channel was progressively enlarged during maintenance events from 10 by 100-feet in 1939 to 20 by 200-feet in 1974.

The Rivers and Harbors Act of 1968 authorized construction and maintenance of the Atchafalaya River and Bayous Chene, Boeuf, and Black, Louisiana, project. It incorporated the existing project and provided an increase in channel width of the navigation channel in Atchafalaya Bay and Bar to 400 feet. Construction of the channel in the bay and Gulf of Mexico was initiated in April 1974 and was complete in December of the same year.

BAY CHANNEL DISPOSAL HISTORY

Dredged material disposal history prior to construction of the enlarged channel in 1974 is limited. Dredging records dating back to 1957 indicate that maintenance of *discontinuous* reaches of the bay and/or bar channels occurred on an annual basis from 1957 until 1974 except for 1958. It is likely that dredged material was placed unconfined in open water on either side of the navigation channel.

Dredged material removed during new work dredging associated with construction of the 400 foot navigation channel in 1974 was placed in open water and on sub-aerial levees of existing delta lobes on the west side of the navigation channel. During maintenance events beginning in 1979, and continuing on an annual basis through 1985, this practice continued. During this period, Big Island was created (1975-1984); dredged material was used to construct a campground at the Louisiana Department of Wildlife and Fisheries (LWDF) camp (Camp Island); dredged material was used to construct islands for colonial nesting seabirds; and some wetlands were created on the western side of Big Island.

In 1987, at the request of the LDWF and the US Fish and Wildlife Service (FWS), the CEMVN began placement of dredged material on the east side of the navigation channel in an effort to stimulate growth of the east side of the delta. Disposal plans developed in coordination with the LDWF, FWS, and other state and Federal natural resources agencies, were designed to direct sediment-laden water through existing natural channels, i.e., God's Pass, East Pass, Ratcliffe Pass, to the east side of the delta. In general, dredged material was to be placed as a series of mounds on the eroding sub-aerial levees of existing delta lobes and on the heads of islands at existing channel bifurcations. The maximum initial placement height of the dredged material mounds was about +5.0 feet NGVD (+5.72 feet MLG). The mounds of dredged material would refurbish the sub-aerial levees which would direct flows into the desired locations within the developing delta. During high flow events, the re-furbished levees would be over-topped and sediment-

laden waters would drop sediment behind them at elevations suitable for the establishment of fresh marsh (+2.3 feet MLG) and/or submerged aquatic vegetation. The refurbished levees also would protect the developing wetlands from wave-induced erosion.

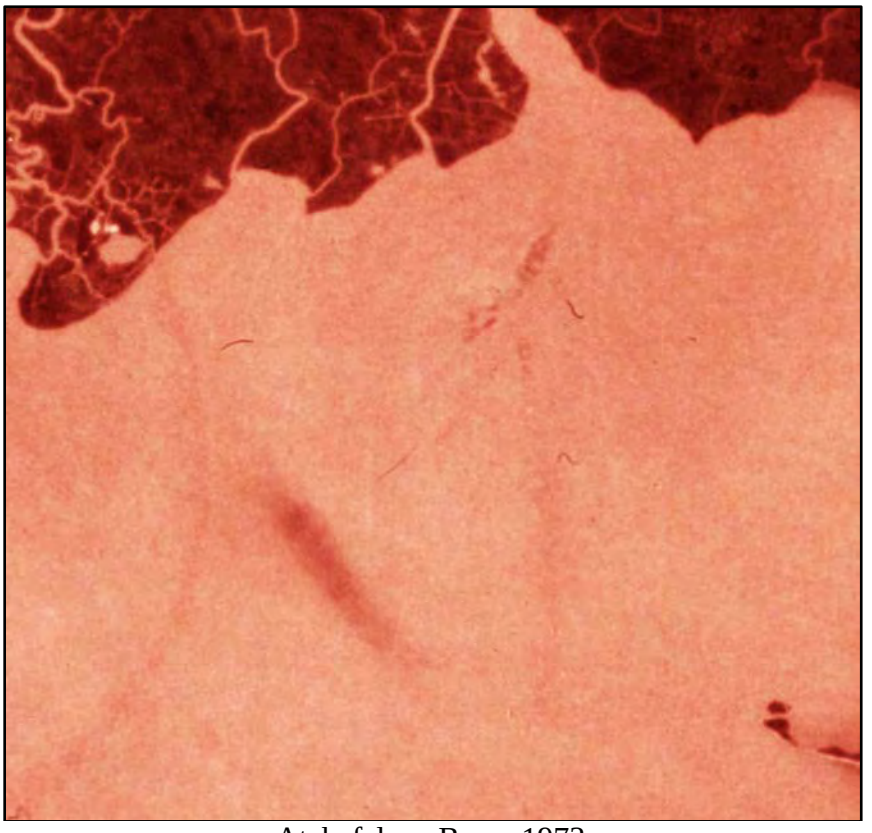
During upper bay maintenance events in 1987, 1988, and 1989, in accordance with this plan, dredged material was placed on the eroded sub-aerial levees of Roger Brown Island, Poule Deaux Island, and Roseate Island and on the heads of God's Island and Long Island. In the lower bay, dredged material was used to maintain and construct islands for colonial nesting seabirds (terns, gulls, and black skimmers) on the west side of the navigation channel. The maximum initial placement height of the dredged material for bird island creation was about +6.0 feet MLG (+5.28 feet NGVD).

Fiscal Year 1973

1. During the 1973 maintenance dredging event (23 July 1972 – 7 September 1972), working under contract 72-C-0182, the cutterhead dredge GD WILLIAMS placed approximately 978,526 cubic yards of dredged material in the open water along the west side of the bay channel. Although no dredged material was to be discharged closer than 1,500 feet from the channel centerline, a build-up of sediments from past placement efforts made it nearly impossible to achieve this minimal distance requirement as the contractor only used floating pipeline and could not access across very shallow water to reach most pipeline discharge locations.

2. During the 1973 maintenance dredging event (15 May 1973 – 7 June 1973), working under contract 73-C-0392, the cutterhead dredge NATCHEZ placed approximately 638,555 cubic yards of dredged material in the open water along the west side of the bay channel no closer than 1,500 feet from the channel centerline.

Atchafalaya Bay – 1972



Atchafalaya Bay – 1973

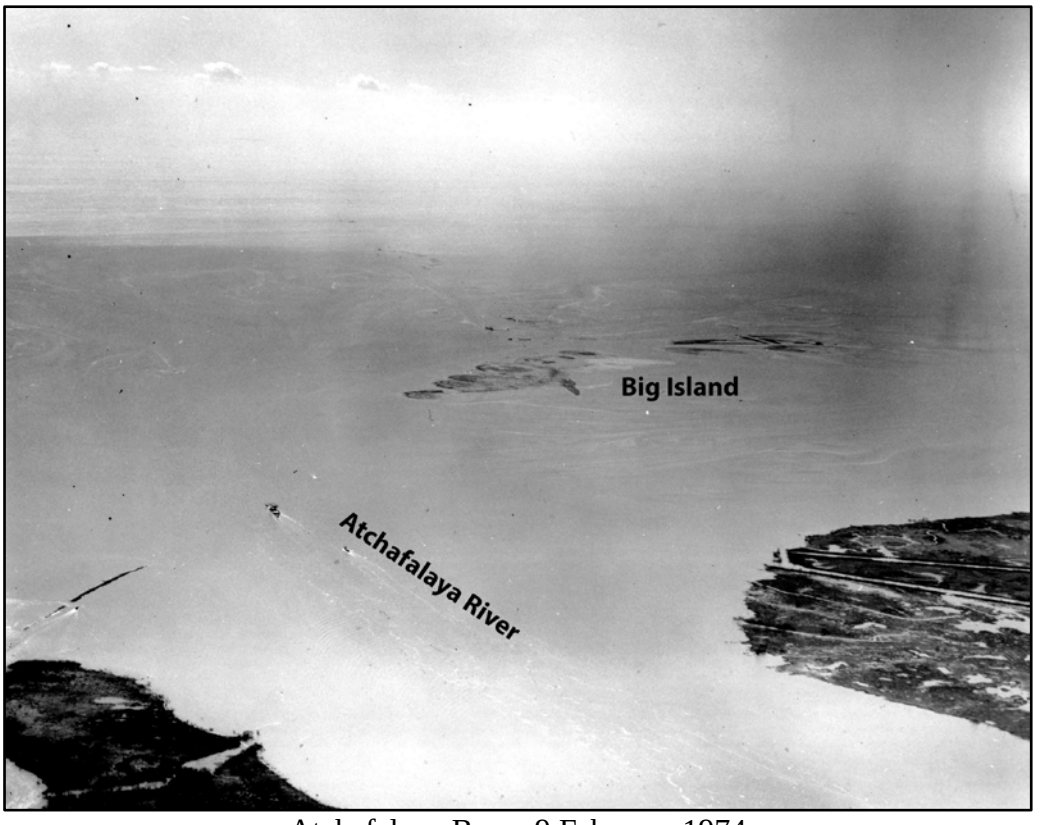
Fiscal Year 1973-1974

During the 1973 to 1974 maintenance dredging event (7 June 1973 – 21 August 1973), working under contract 73-C-0432, the cutterhead dredges NATCHEZ and PORT ARTHUR placed approximately 2,671,238 cubic yards of dredged material in the open water along the west side of the bay channel no closer than 1,500 feet from the channel centerline.

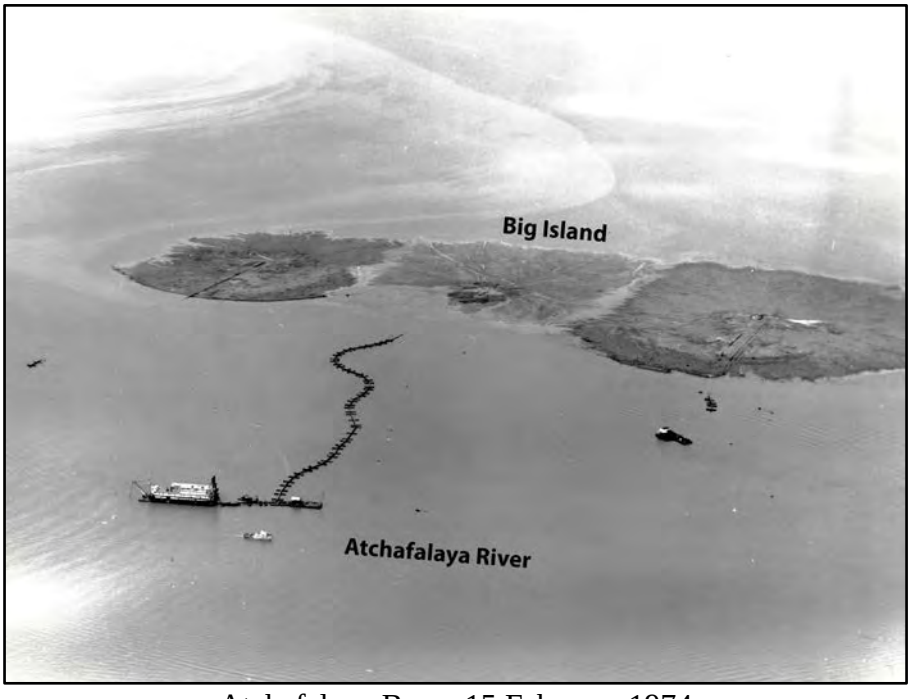
Fiscal Year 1974

1. During the 1974 maintenance dredging event (19 January 1974 – 10 April 1974), working under contract 74-C-0161, the cutterhead dredge NATCHEZ placed approximately 1,306,388 cubic yards of dredged material in the open water along the west side of the bay channel no closer than 1,500 feet from the channel centerline.

2. During the 1974 maintenance dredging event (19 January 1974 – 10 April 1974), working under contract 74-C-0162, the cutterhead dredge ARKANSAS placed approximately 1,107,736 cubic yards of dredged material in the open water along the west side of the bay channel no closer than 1,500 feet from the channel centerline.



Atchafalaya Bay – 9 February 1974



Atchafalaya Bay – 15 February 1974

Atchafalaya Bay – 15 February 1974

Fiscal Years 1974-1975

Deepening and widening of the channel to dimensions of 20 feet deep by 400 feet wide took place during 1974 to 1975 (11 April 1974 – 2 December 1974). Working under contract 74-C-0279, the cutterhead dredges NATCHEZ, ARKANSAS, GA McWILLIAMS, TOM JAMES, CAPTAIN CLARK, and PORT ARTHUR placed a total of approximately 6,895,682 cubic yards of dredged material unconfined at various sites west of the bay channel. During this work, the passage of Hurricane Carmen in September 1974 resulted in additional shoaling of the channel under construction.

At least 2,477,852 cubic yards were placed at **Big Island** during this contract work. Also receiving dredged material were **Camp Island**, **Willow Island**, **Yvette Island**, **Melanie Island**, **Donna Island**, **T-Pat Island**, and **Skimmer Island**. Additional un-named placement sites were also used between Melanie Island and Donna Island on the west side of the channel.

Fiscal Years 1975-1976

During the end of the 1975 maintenance event and the beginning of the 1976 maintenance event (28 May 1975 – 16 August 1975), working under contract 75-C-0319, the cutterhead dredge PORT ARTHUR placed approximately 1,863,036 cubic yards of dredged material into unidentified bay channel disposal sites located along the west side of the channel.

Fiscal Year 1976

During the 1976 maintenance event (21 August 1975 – 9 November 1975), working under contract 76-C-0060, the cutterhead dredge PORT ARTHUR placed approximately 2,209,936 cubic yards at three sites in the upper bay (**Big Island**, **Yvette Island**, **Melanie Island**) and at three colonial seabird nesting islands in the lower bay (**Donna Island**, **T-Pat Island**, **Skimmer Island**).