DREDGED MATERIAL BENEFICIAL USE DISPOSAL HISTORY OF THE BARATARIA BAY WATERWAY

2002

BAR CHANNEL

Background:
During the FY 2002 BBWW bar channel maintenance event (contract DACW29-02-C-0034: 29 April 2002 – 24 June 2002), dredged material removed from the Mile -0.5 to Mile -3.0 reach was placed at Grand Terre Island in the easternmost cell of the back-bay placement area to restore marsh, and on the Gulf of Mexico shoreline of the island for beach nourishment. An artificial tidal creek (i.e., trenasse) was excavated to provide tidal and fisheries connection between Barataria Bay and the back-bay placement site interior. The cutterhead dredge TOM JAMES performed all maintenance dredging under this contract.

Dredged Material Placement Event:
1. Grand Terre Island Back Bay Placement Site:
    a. From 11 June 2002 through 22 June 2002, the TOM JAMES placed approximately 126,000 cubic yards of shoal material into the approximately 37-acre easternmost cell of the previously used wetlands development disposal area located in the back-bay area of Grand Terre Island
    b. Dredged material was placed into this cell to a maximum initial elevation of +3.5 feet MLG.
    c. A Y-valve was used to alternate discharge of dredged material from this disposal site to the shoreline placement disposal site during this period.

2. Gulf of Mexico Shoreline Placement Site:
    a. From 11 June 2002 through 24 June 2002, the TOM JAMES placed approximately 523,628 cubic yards of dredged material at the shoreline nourishment disposal site.
    b. Dredged material was placed unconfined to a maximum initial elevation of +3.0 feet MLG in the surf zone about 100 feet from the water's edge.

Containment and Access:
1. Grand Terre Island Back-Bay Placement Site:
    a. The back bay disposal area cell was confined on the bay side by an existing rock dike constructed to an elevation of +5.0 feet MLG and separated from the previously filled cells by an interior earthen dike constructed to an elevation of between +3.25 feet MLG and +3.75 feet MLG.
    b. An interior earthen dike was constructed along the inside of the existing rock dike to prevent dredged material from escaping between the rocks and into the adjacent Barataria Bay where oyster leases were located.
    c. Access to this disposal area cell was across the island from the Gulf of Mexico. The access corridor for construction equipment was about 100 feet in width.

2. Gulf of Mexico Shoreline Placement Site:
    a. All shoal material placed at this disposal site was discharged unconfined along the shoreline disposal area.

Results:

1. Approximately 18 acres of marsh were created using about 126,000 cubic yards of shoal material in the back-bay placement site.

2. Approximately 9 acres of barrier island shoreline were created by this placement effort.

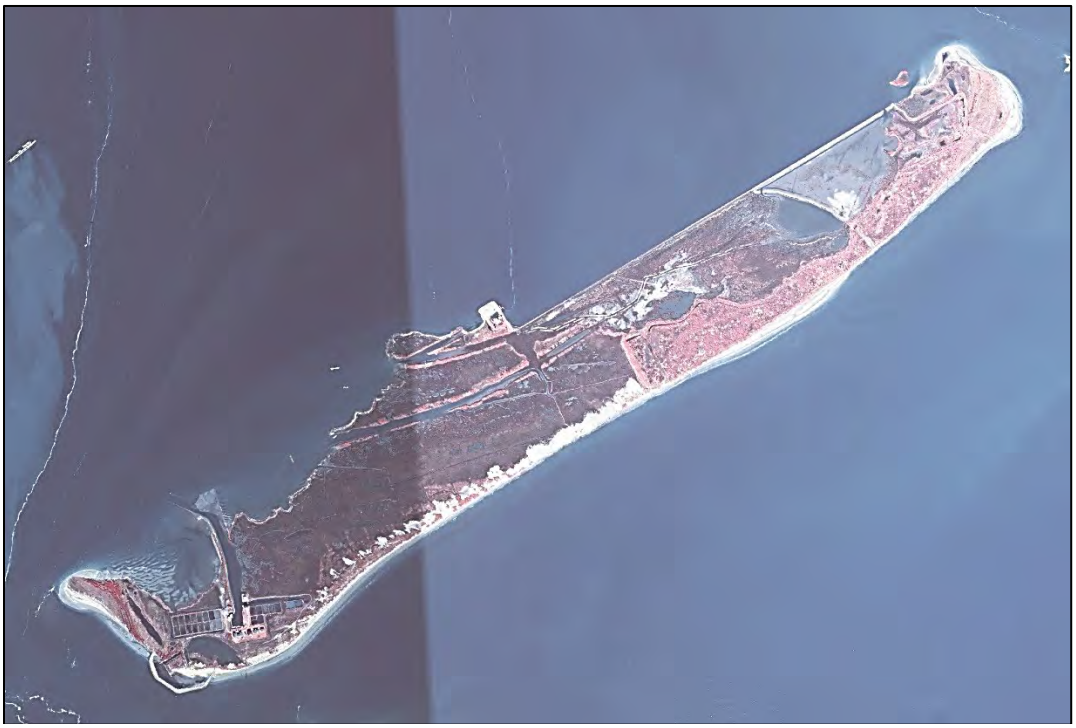
Notes:

1. Trenasse Construction:
    a. Construction of the artificial tidal creek (i.e., "trenasse") was delayed until late April 2003 due to the presence of nesting migratory shore birds (primarily least terns) on the back bay disposal site.
    b. Between 1 April 2003 and 8 April 2003, a trenasse was constructed to provide fisheries access through the westernmost and middle placement cells in the Grand Terre Island back-bay placement area by tidally connecting them to Barataria Bay. The trenasse was routed so that it would not be cut along the shortest straight-line route but along a sinuous path that provided the appearance of a natural route once the marsh became fully vegetated. The trenasse began at the junction of the northernmost petroleum industry canal located at the western end of the back-bay placement area and terminated at a pond located at the eastern end of the middle placement cell.
    c. The trenasse was constructed to an approximate width of 6 feet, an approximate depth of –0.5 feet MLG, and an approximate length of 6150 linear feet. Placement of trenasse material was staggered alongside the trenasse as mounds no higher than +3.5 feet MLG to +5.0 feet MLG (depending on existing ground elevations), about 200 feet in length, and with a minimum gap of 50 feet between successive mounds. Trenasse material mounds were set back from the edge of the trenasse by 5 feet on either side. The exact trenasse alignment through the existing back-bay placement area was determined just prior to its construction.
    d. The northernmost petroleum industry canal was excavated to a depth of –0.5 feet MLG, where necessary, to facilitate fisheries access from Barataria Bay to the trenasse. Canal material was placed within the canal to either side of the cut in a similar manner as the trenasse dredged material.

2. Backfilling of Old Access Corridors and Borrow Ditches:
    a. Between 1 April 2003 and 8 April 2003, the FY 01 construction equipment access corridor, the FY 99 construction equipment access corridor, and an FY 96 borrow ditch were all backfilled to match adjacent terrain elevation. Material used to backfill these disposal area features were obtained from the adjacent, existing earthen levees constructed during the FY 96 maintenance dredging and disposal event.

3. CWPPRA Vegetative Plantings:
    a. During May 2001, a variety of plants typical to coastal marsh were planted in the western and middle cells of the Back Bay placement site. Vegetation included smooth cordgrass, black mangrove, and marshhay cordgrass.

Grand Terre Island Post-Back Bay Placement Event (2002)


Grand Terre Island Post-Back Bay Placement Event (2004)

Grand Terre Island Post-Back Bay Placement Event (2005)

2006

BAR CHANNEL

Background:
During the FY 2006 BBWW bar channel maintenance event (contract W912P8-06-C-0169: 28 July 2006 – 15 August 2006) about 687,850 cubic yards of dredged material were removed from the BBWW bar channel and placed along the Gulf of Mexico shoreline of Grand Terre Island for shoreline nourishment. The cutterhead dredge GEORGE D. WILLIAMS performed all maintenance dredging under this contract.

Dredged Material Placement Event:
From 28 July 2006 through 5 August 2006, the GEORGE D. WILLIAMS placed shoal material removed from the BBWW bar channel approximately Mile -0.6 to Mile -2.8 dredging reach unconfined along the eastern Gulf of Mexico shoreline of Grand Terre Island. Approximately 687,850 cubic yards of shoal material was discharged to a maximum initial elevation of +3.0 feet MLG at the beach nourishment disposal area in the surf zone about 100 feet from the water's edge. About 18,500 feet of dredge pipeline was used for this maintenance effort.

Containment and Access:
All shoal material was discharged unconfined along the beach nourishment disposal area.

Results:
Approximately 24 acres of barrier island shoreline were created by this placement effort.

Grand Terre Island Post-Shoreline Placement Event (November 2007)

Grand Terre Island Post-Shoreline Placement Event (November 2008)

2010

BAR CHANNEL

Background:
During the FY 2010 BBWW bar channel maintenance event (contract W912P8-09-C-0079: 12 November 2009 – 30 November 2009) about 480,305 cubic yards of dredged material were removed from the BBWW bar channel and placed along the Gulf of Mexico shoreline of Grand Terre Island for shoreline nourishment. The cutterhead dredge CAPTAIN FRANK performed all maintenance dredging under this contract.

Dredged Material Placement Event:
From 12 November 2009 through 30 November 2009, the CAPTAIN FRANK placed shoal material removed from the BBWW bar channel approximately Mile -0.6 to Mile -2.9 dredging reach unconfined along the eastern Gulf of Mexico shoreline of Grand Terre Island. Approximately 480,305 cubic yards of shoal material was discharged to a maximum initial elevation of +3.0 feet MLG at the beach nourishment disposal area in the surf zone about 100 feet from the water's edge. Shoal material was pumped parallel with the Gulf shoreline starting at the northeast end of the disposal site and continuing to the southwest end of the disposal site.

Containment and Access:
All shoal material was discharged unconfined along the beach nourishment disposal area.

Results:
Approximately 36 acres of barrier island shoreline were created by this placement effort.

Grand Terre Island Post-Shoreline Placement Event (November 2009)

Grand Terre Island Post-Shoreline Placement Event (November 2010)

Grand Terre Island (January 2012)

Grand Terre Island (December 2012)

Grand Terre Island (December 2013)

Grand Terre Island (November 2017)

2018

BAR CHANNEL

Background

From 23 December 2017 through 17 January 2018, the cutterhead dredge ROBERT M WHITE (working under contract W912P8-17-C-0053) placed shoal material removed from the BBWW bar channel (approximate Mile -0.0 to Mile -3.5 dredging reach) semi-confined onto the western portion of Grand Terre Island, and unconfined along the island's western Gulf of Mexico shoreline.

Placement Event

Approximately 645,508 cubic yards of shoal material was discharged semi-confined to a maximum initial elevation of about +7.0 feet MLG onto the westernmost portion of Grand Terre Island for restoration of barrier island habitat. Dredged material was primarily discharged into the old aquaculture ponds located on the island's western end. Dredged material was also discharged into the shallow open water lagoon that had formed along the eastern side of Fort Livingston.

Approximately 48,000 cubic yards of shoal material was discharged unconfined to a maximum initial elevation of about +3.0 feet MLG along the island's western Gulf of Mexico shoreline in the surf zone about 100 feet from the water's edge as shoreline

nourishment. Shoal material was pumped in an eastern direction parallel with the Gulf shoreline starting adjacent to the existing Fort Livingston protective rock dike.

Containment and Access:
Hay bales were used to prevent the discharge of dredged material from eroding Fort Livingston's foundation and from escaping into the adjacent waters of Barataria Bay, while all shoal material was discharged unconfined along the beach nourishment disposal area.

Dredge pipeline access was from the Gulf of Mexico directly onto the island, while construction equipment accessed the disposal sites from the old LDWF access channel. The LDWF access channel required some dredging to enable its unrestricted use by the contractor. All access channel material was placed unconfined in shallow open water located along the east and west sides of this channel to a maximum initial elevation of about +4.5 feet MLG.

Results:
Approximately 12 acres of barrier island habitat and approximately 5 acres of shoreline habitat were restored by this placement effort.

Grand Terre Island Post-Placement Event (December 2018)

Grand Terre Island Placement Event: East Side of Fort Livingston (5 January 2018)

Grand Terre Island Event: Gulf Shoreline Placement (5 January 2018)

Grand Terre Island Event: Aquaculture Ponds Placement (5 January 2018)

Grand Terre Island Event: Aquaculture Ponds Placement (5 January 2018)

Grand Terre Island Placement Event: East Side of Fort Livingston
Note hay bale deflection dike (5 January 2018)

Grand Terre Island Post-Placement Event: Aquaculture Ponds (31 May 2018)

Grand Terre Island Post-Placement Event: Gulf Shoreline (31 May 2018)

Grand Terre Island Post-Placement Event: East Side of Fort Livingston (31 May 2018)

Grand Terre Island West End Post-Placement Event (January 2020)