

Report: FINAL REPORT  
Dickinson Bay Island II Restoration  
Award # F11AC00737  
Provided by: Galveston Bay Foundation

Project Summary

The Dickinson Bay Habitat Island & Oyster Reef Restoration project is designed to continue the efforts to replace three critical multiple-use habitat islands in Dickinson Bay that have eroded over the past six decades and to restore oyster reefs within the Galveston Bay system. The project addresses habitat loss—the highest priority issue facing Galveston Bay according to *The Galveston Bay Plan*, the bay’s comprehensive coastal management plan—particularly of coastal wetlands and bird rookery islands, both of which have been lost due to historic subsidence and subsequent erosion, and of oyster reefs, which suffered severe damage and losses during Hurricane Ike in 2008. The first of the three remnant islands in Dickinson Bay was restored in 2007, and consists of a 5-acre, horseshoe-shaped clay island protected with rip-rap with marsh mounds in the interior plus a 2-acre oyster reef adjacent to the island. The current project proposes the restoration of the second island. While the design of this second island is yet unknown, conceptually, the restoration project would involve raising elevations along certain portions of the existing remnant island ridge in Dickinson Bay and sculpting the island to prescribed slopes and elevations, with some portion of the project providing substrate for oyster reef restoration. The construction of this project in Dickinson Bay can aim to create essential habitat for fish, shellfish, and colonial waterbirds; improve water quality in an impaired water body; enhance recreational fishing opportunities to the general public; educate the community on the importance of wetlands and other Galveston Bay habitat types; provide opportunities for community involvement in wetlands restoration; and serve as erosion protection for TNC’s Texas City Prairie Preserve, one of the few remaining homes and breeding grounds for the endangered Attwater’s prairie chicken. Targeted habitat types and acreages include: 2 acres of oyster reef, 2-3 acres of upland/bird nesting and rookery habitat, and 0.5-1 acre of estuarine intertidal wetlands. Actual habitat types and acreages to be constructed will be determined in the engineering and design phase of the project.

Project Accomplishments to date

To date no project planning or on the ground process has been made.

GBF has been seeking additional funding for the project and has secured funding from a Restore America’s Estuaries and NOAA partnership (RAE-NOAA). The RAE-NOAA funds were awarded specifically to fund engineering and design costs. GBF has executed and been given a notice to proceed with project activities for GBEP funds. GBEP funds will be used to match RAE-NOAA funding. During the

reporting period preliminary data from TPWD side scan work in the area and review of aerial photography have indicated 3 sites that may be suitable for project construction.

A Request For Qualifications (RFQ) for engineering consulting firms was issued in February with a deadline for submissions being February 28, 2013. Three consulting firms requested information on the proposed project during the RFQ and two firms provided qualification materials as a result of the advertised RFQ. As a result of the RFQ GBF will engage in conversations with HDR and seek to execute an agreement with HDR to be the project consultant.

An agreement for Phase I engineering between GBF and HDR was executed on April 15, 2013. Phase I will concentrate on general data collection at 3 potential island construction sites, 2 in Dickinson Bay and one in Moses Lake. Data collected will include: bathymetric and magnetometer surveys, basic geotechnical review, and biological site reviews.

The first meeting with HDR and the technical advisory committee occurred May 2, 2013. Shortly after the technical advisory committee meeting HDR began data collection on three potential project site locations. The data collected as part of the phase I contract include the following: bathymetric survey, magnetometer survey, preliminary geotechnical investigations, and biological investigations within the potential project sites and adjacent areas.

HDR provided a Data Collection Memorandum document to GBF on July 12, 2013 detailing the results of the data collection as outlined above. This Memorandum was distributed to the technical advisory team for review and discussion. The biological investigation found that one of the sites had oyster shell and patches of oyster reef within the proposed project site and surrounding area. Due to this discovery that project site was removed from consideration for the project. A decision was made to focus on the remaining two sites moving forward.

GBF and HDR agreed to a phase II contract on July 30, 2013. Phase II work will include additional more detailed geotechnical analysis of the two remaining potential sites and utilizing this data to prepare an alternative analysis.

On May 7, 2014 a technical advisory committee was held at GBF. At this meeting HDR presented conceptual designs for two islands, ground nesting and shrub nesting. Estimated construction cost analysis was discussed as it related to the conceptual designs. The group discussed the designs and costs and made recommendations to HDR to modify the ground nesting island to potentially cut construction cost. HDR revised project design and updated cost estimates. In October 2014 GBF received final design alternative analysis.

GBF has executed a proposal from HDR for permitting services. HDR has started preparation of USACE application materials. The upland, brush nesting island has been identified for NRDA funding and is currently undergoing NRDA public comments on proposed projects. Due to the potential use of NRDA funding for one of the islands it has been determined that a USACE permit will be sought for each island individually.

Funding for Design, Engineering, and permitting for the project has been expended as follows:

Funding Source	Amount
USFWS – Coastal Program	\$50,000.00
Galveston Bay Estuary Program	\$100,000.00
Restore America’s Estuaries – NOAA	\$51,000.00
Total	\$201,000.00