

# Cooperative Habitat Creation Efforts In Galveston Bay, Texas

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The Galveston Bay system is not unlike many of our nation's coastal bays and estuaries in that wetland habitat has been declining over recent decades as human uses of the Bay's resources have taken their toll. Over 25,000 acres of wetlands were lost around Galveston Bay between 1956 and 1979 alone. Erosion, subsidence, coastal development, and dredging are some of the physical forces that have played a role in changing the face of the Bay system. Furthermore, Galveston Bay is home to 4,000,000 people and the nation's largest petrochemical complex, all contributing municipal and industrial wastes and non-point source pollution.

Also, like much of the nation, the socioeconomic and political history of Galveston Bay centered around use of the region's natural resources -- timber, oyster shell, fisheries, and oil and gas. Recently, however, there has been a growing awareness of the need to restore balance. The Galveston Bay Foundation (GBF) is a citizens' organization formed in 1987 to preserve and enhance Galveston Bay for multiple uses, through education, conservation, research, and advocacy. Its Board of Trustees is composed of individuals and groups representing the diverse users of the Bay.

It is through the diversity represented in the Galveston Bay Foundation that some of the solutions to the Bay's problems are found. Three years ago, a cooperative effort was begun to plant smooth cordgrass marsh for habitat creation and shoreline erosion protection. Smooth cordgrass, *Spartina alterniflora*, is the plant that grows without competition in the intertidal zone. Its marshes provide the habitat so essential for marine life, while at the same time absorbing wave energy that would otherwise erode the shoreline.

The project has been guided from the beginning by two GBF Advisory Trustees, Edward Seidensticker, of the Soil Conservation Service (SCS), and Robert Nailon, formerly of

the Marine Advisory Service. From their early efforts, procedures were established for transplanting the cordgrass and providing suitable protection for the young transplants. Each brought his particular expertise, the flora and the fauna, in a combination of irrepressible energy and commitment to the project.

In 1989, an agreement was signed between the Galveston Bay Foundation and the Port of Houston Authority to plant cordgrass on islands owned by the Port in the San Jacinto River. In 1990, planting began, with the Port providing funding for equipment and supplies used for the project that year. The joint effort of local, State, and Federal agencies was supplemented by volunteer labor provided through the Galveston Bay Foundation. Twenty volunteers from the individual and organization members of the Foundation participated, representing conservation (Houston Sierra Club), recreation (Houston Canoe Club), and college service organizations. The two plantings were also assisted by volunteers from the Saltwater Anglers League of Texas (SALT), who provided their boats for transportation to the islands.

The second year of planting, 1991, brought an expanded array of volunteer organizations, an expanded role for SCS, and an additional site. In addition to the individual and organization members of GBF, new participants were recruited from agencies and local corporations, including the Texas Water Commission, Exxon Chemical, Exxon Refinery, and Tenneco. A cooperative agreement between GBF and SCS provided insurance for the volunteers who became part of the SCS Earth Team program. A new cooperative agreement with the U.S. Fish and Wildlife Service provided fencing materials and supplies to support a planting project to protect the shoreline of the Anahuac National Wildlife Refuge. With coordination by GBF volunteers and staff, seven plantings

were completed that year, five at the refuge (not requiring boat transportation) and two on the San Jacinto River. A total of 92 volunteers participated.

For 1992, the project received two additional boosts. The Texas Waterway Operators Association -- the barge industry -- funded the construction and operation of a boat for GBF. The Bay Ranger, with capacity for 16 volunteer workers, was christened in the fall of 1991. The availability of regular, safe boat transportation enhanced the opportunities. In addition, the Wray Trust, a local, charitable foundation, funded a part-time conservation intern for GBF to coordinate the effort, build in an educational component, and develop documentation on the progress of the project. Continued

funding from the Port allowed for the purchase of additional scientific equipment, as well as materials and supplies. In 1992, approximately 200 volunteers participated in 16 plantings at 6 sites, with over 20,000 square feet of marsh successfully planted.

Each site brings its own unique challenges, mostly in methods to protect the new, young transplants, whether from wave action or from a variety of non-native predators. In each case, however, the end of the day brings an overwhelmingly positive response from volunteers, with the wealth of new knowledge they have gained from the experience and the satisfaction from knowing that they have contributed to an improved ecosystem for Galveston Bay.