



USACE MOBILE DISTRICT

ENVIRONMENTAL COMPLIANCE TECHNICAL SUPPORT

MacDill Air Force Base, Tampa, Florida

PROJECT HIGHLIGHTS

CLIENT PROFILE

The U.S. Army Corps of Engineers (USACE) Mobile District manages a variety of programs in Alabama, Georgia, Florida, Mississippi, and Tennessee as well as Central and South America. MacDill Air Force Base (MAFB) is a 5,630-acre active military installation and home to the 6th Air Refueling Wing.

PROJECT OVERVIEW

The firm was responsible for design of a series of multiuse nature trails throughout undeveloped areas on the base, design and permitting for restoration of a 25-acre mangrove, and design and permitting for the nearshore marine restoration of Gadsden Point Dredge holes. These tasks assisted MAFD in meeting its conservation goals.

CHALLENGES

- Completed 35% designs for the multiuse trails with no additional surveying due to budget constraints, creating a challenge to provide adequate design details for surface water/wetland trail crossings.
- Relied solely on existing LiDAR provided by MAFB. Worked with the client and all regulatory agencies to obtain permits from USACE, Southwest Florida Water Management District (SWFWMD), and Hillsborough County Environmental Protection Commission (EPC).

THE MSE APPROACH

Multiuse trails were designed at three locations to allow access for land management activities (mosquito control, invasive species treatment, prescribed fires) and to provide passive recreational uses. MSE conducted ecologic assessments for federal/state-protected species, wetland surveys, and permitting activities. Trails were designed to avoid ecological impacts where possible while allowing access for required activities using geotechnical materials to provide trail stabilization. MSE also completed the design and permitting for restoration of a 25-acre mangrove wetland area impacted by development activities and modifications meant to improve drainage and control mosquitos. Using LiDAR provided by MAFB, the design will restore natural hydrology and drainage patterns, remove dredged channel spoil mounds, and restore/create associated coastal wetland habitats through hydro-blast construction. MSE coordination with regulatory agencies allowed the use of an existing wetland elevation to determine the elevation of upland spoil mounds to hydro-blast, saving time and money by avoiding additional surveys or design. In addition, MSE completed a design to fill/restore the Gadsden Point Dredge holes located on the southeast corner of MAFB. Based on a bathymetric survey of this nearshore area, MSE coordinated with local sources (USACE dredge spoil disposal areas, Port of Tampa maintenance projects) for 18,000 cubic yards of fill.

ACCOMPLISHMENTS

- Extensively used LiDAR surveying for mangrove restoration/multiuse trail design, resulting in major cost savings
- Obtained buy-in on design consistent with prior mangrove restoration for quick federal/state permit authorizations

AREAS OF EXPERTISE

- Wetland delineation
- Endangered/protected species surveys
- Environmental resource permitting
- Wetland mitigation planning
- Agency coordination



Wetlands adjacent to trail location



Gopher tortoise burrows along potential trail location