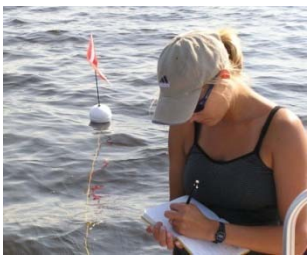


# MARINE & COASTAL *Services*



**BIRKITT**  
ENVIRONMENTAL  
SERVICES, INC.



Birkitt Environmental Services, Inc. (Birkitt) has provided services for coastal and marine projects throughout Florida. Birkitt staff are experienced with integrating solid scientific assessment, specialized permitting knowledge, and an in-depth understanding of marine construction processes to ensure practicable and realistic permit conditions. Services have included assistance on complex marine and nearshore construction for natural gas pipelines crossing sensitive marine habitats, design of shoreline protection for rivers, marina and navigation channel siting, environmental impact assessments and permitting. Birkitt has served as Project Manager or Permitting Coordinator for large, complex, multi-disciplinary projects involving land and marine surveying, environmental assessments (coastal and deepwater), engineering, geotechnical, and archeological services working closely with project engineers and client teams to provide expedited permitting. Birkitt can also provide LEED accredited professionals to assist with green marina consulting services.

## ***Key Marine and Coastal Services Include:***

- State regulatory and proprietary permitting and approval processes
- Sovereign submerged lands easements, leases, consent to use, and exemptions
- Governor and Cabinet approvals
- Sections 404 (CWA) and Section 10 (River and Harbors Act) federal permitting
- NEPA compliance, EA, EIS documents and Essential Fish Habitat (EFH)
- Protected species, Endangered Species Act (ESA) consultation
- Water quality plans and variances for construction
- Public relations support for sensitive projects
- Oversight of hydrographic studies and engineering design
- Coordination with Federal Energy Regulatory Commission and Minerals Management Service
- Certified Marine Mammal and Sea Turtle FWC Observation

## **Green Marina Consulting Services include:**

- Site selection for impact minimization
- Water conservation practices and technologies
- Energy conservation recommendations
- Sustainable materials and resource usage

## **Marine and Coastal Experience includes:**

- Seagrass, benthic habitat, and coral reef/hard bottom assessments and mitigation
- Permitting for shoreline protection, docks and marine construction activities
- Marina siting, design, permitting, and estuarine mitigation services
- Essential Fish Habitat (EFH) assessment
- Marine mammal and fisheries surveys
- Manatee and sea turtle impact studies and protection plans
- Marine construction monitoring plans
- Water quality assessments and monitoring

*people and nature*

**110 S. Edison Ave. Tampa, Florida 33606 813-259-1085 [www.birkitt.com](http://www.birkitt.com)**

# **MARINE & COASTAL** *Project Experience*

## ***Magnolia Bay Marina & Resort***

Birkitt provided project management, environmental consulting services, and permitting services, including the oversight of engineering design and modeling and assessment of wetlands, seagrasses, threatened and endangered species, and biotic communities for the 650 acre Magnolia Bay Marina and Resort development project. The seagrass assessment involved an analysis of near shore areas based on FLUCFCS codes, aerial photographic interpretation and detailed seagrass surveys; potential seagrass mitigation strategies were developed. The Environmental Resource Permit (ERP) and the Section 404/10 permit applications for the marina and associated development were submitted. The project has since been revised to an 1,174 acre mixed use, town center and resort development community which will include a luxurious waterfront golf course.

## ***Harborview Marina***

Birkitt provided a technical and permitting feasibility assessment and is providing permitting, environmental support, and marina design services for a proposed marina along the shoreline of the Peace River in Charlotte County, Florida. The proposed project includes both a 25-30 acre private marina basin and a public boat ramp. Environmental consulting services include environmental permitting, threatened and endangered species evaluations, marine benthic community surveys, and biotic communities' assessments which were conducted to aid in the marina design. Extensive agency coordination is underway with the Southwest Florida Water Management District, and the U.S. Army Corps of Engineers, as well as several other regulatory agencies. Birkitt is providing oversight of the engineering team to conduct the hydrodynamic modeling to assess if the proposed design meets the appropriate environmental regulations for marina design. Birkitt is also supporting the DRI ADA process.

## ***Tractebel Calypso Pipeline***

Birkitt provided services to obtain environmental permits (state, federal, and local), and assisted in the preparation of FERC Resource Reports, and environmental project management support for 95 miles of natural gas pipeline for the Tractebel Calypso Pipeline System. The proposed pipeline was proposed to begin at a LNG facility in the Bahamas and cross the Atlantic, making landfall at Port Everglades in Southeast Florida. The project involved issues associated with nearshore coastal waters, potential impacts to coral reefs and seagrasses, water quality impacts, and with traversing John U. Lloyd Beach State Park. State and Broward County permits were obtained and Governor and Cabinet approval for use of sovereign submerged lands was received.

## ***Gulfstream Natural Gas Pipeline***

Birkitt obtained all environmental permits and proprietary approvals (state, federal, and local) for the Florida portion of a 753-mile natural gas pipeline for Gulfstream Natural Gas System, utilizing the "team permitting" approach. The pipeline crossed the Gulf of Mexico, entering Florida at Tampa Bay and extending across the state. The project involved issues associated with nearshore coastal waters in Manatee and Hillsborough Counties, the phosphate mining district, Lake Wales Ridge ecosystem, Kissimmee River Restoration Project, and wetlands and water bodies throughout the onshore route in central and south Florida. The use of habitat replacement models as mitigation for land bottom impacts were negotiated and /or water quality variance.

## ***Perico Harbor Marina***

Birkitt provided consulting support for the conversion of a large marina (15 acres with 9.5 acres seagrass and benthic habitat) from a 250-boat dry storage facility with 15 wet slips to a 150-200 wet slip facility. Birkitt assisted in the preparation of the ERP application documentation, including evaluating existing benthic habitats, development of a Manatee Protection Plan, and conducting Endangered Species and Essential Fish Habitat coordination requirements. Important issues involved dredging, translocation of oyster bars, and protection of manatees and seagrasses.

## ***Chula Vista Mobile Home Park Boat Basin Dredging and Dock Construction Project***

Birkitt is providing permitting and mitigation support to Bloomfield-St. Petersburg Properties for approval to dredge and construct docks in a boat basin located along the Little Manatee River. Exemptions for dredging and dock construction were utilized and SWFWMD approval was received. Assistance was provided to obtain appropriate Tampa Port Authority and Hillsborough County Environmental Protection Commission (EPC) permits. Mitigation design for proposed impacts to the estuarine habitat from the dredging activities included a 5 foot wide mitigation littoral zone planted with red mangroves and black needlerush. Birkitt is conducting the mitigation monitoring of the mitigation area.

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