Coastal Dune Lakes of South Walton County, Florida

Guide for Preserving the Health & Vitality of the Globally Rare, Coastal Dune Lake Ecosystems in South Walton County, Florida

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What is a Coastal Dune Lake?

Coastal dune lakes are permanent water bodies, typically shallow and irregularly shaped, found within two miles of the coast.

- They are primarily freshwater systems, but most of Walton County’s coastal dune lakes are brackish, composed of both fresh and saltwater.
- The lake-water is generally colored (e.g., dark or tea colored) – not dirty! Water is stained in the forested uplands before it washes into the lakes. Just like a tea, water soaks the pine needles, cypress needles, leaf litter, and other organic matter in swampy areas. Tannic acids leach into the water and create the dark coloration.
- Most Walton County dune lakes have an outfall which is a natural opening to the Gulf of Mexico that occurs when a lake reaches flood level. Outfalls open and close intermittently based on varying conditions of the wind, tides, and lake water levels.
- There are 15 lakes recognized as coastal dune lakes by Walton County.
What is an Outfall?

- When a coastal dune lake reaches a relatively high water level, it creates an opening through the dune system and empties into the Gulf of Mexico.
- The outfall or outlet of a coastal dune lake is the channel formed between the lake and the Gulf of Mexico.
- Depending on tides and weather conditions (particularly winds and storms), saltwater from the Gulf may enter the lake, along with saltwater plants and animals.

Digging in or around a coastal dune lake outlet/outfall is not allowed with a permit through the Florida Department of Environmental Protection Coastal Construction Control Line (Section 161.053, Florida Statutes)

Are all of Walton County’s coastal dune lakes the same?

- Each of Walton County’s coastal dune lakes has its own personality, based on the combination of its size, shape, watershed features, surrounding land uses, and outfall characteristics.
- Outfall openings vary greatly in length, frequency and duration.
- As a result, some of the dune lakes can be completely freshwater, some brackish, and some saltwater. Varying degrees of salinity occur between different lake stages and between different portions of each lake (based on proximity to the Gulf and outfall opening frequency).
- The changing condition of water chemistry in the coastal dune lakes makes them dynamic, biologically diverse ecosystems.

What are the lakes’ water sources?

- Water comes from groundwater seepage – both directions, from the uplands to the lakes and from the Gulf to the lakes – as well as storm surge, rainwater drainage, creeks, and springs.
- Differences in the water source(s) from one lake to the next affects differences in salinity.
There are many things to do on and around the dune lakes, such as boating, fishing, paddle-boarding, kayaking, biking, hiking, etc.

There are many state lands bordering or near the dunes lakes that provide access and recreational options. These include several state parks (Top sail Hill Preserve, Grayton Beach, Deer Lake, Camp Helen) and Point Washington State Forest.

Western, Eastern and Powell Lake have public boat ramps for access with motorized boats. Jet propelled motor craft (jet skis) are prohibited on all coastal dune lakes except the Bay County portion of Lake Powell.

*Remember to always rinse your boat before and after leaving a coastal dune lake to avoid spreading invasive plants and animals.

For information on coastal dune lake public access options for recreational activities visit http://www.co.walton.fl.us/97/Coastal-Dune-Lakes
HOMEOWNERS GUIDE TO Living on a Coastal Dune Lake
The Importance of Vegetation

EROSION CONTROL
As development increases around coastal waterways, so does erosion. Vegetation can help protect slopes by reducing erosion, strengthening soil, and inhibiting landslides. The use of vegetation as a form of erosion control is not only inexpensive, but it adds wildlife habitat and aesthetic quality.

WATER QUALITY
Vegetation can act as a natural filter for water bodies. Over 1/3 of our nations waterways are polluted to some degree, mainly from non-point pollution. Vegetation can help by soaking up stormwater runoff before it enters the water. Contaminants are taken up by the tissues in the plants or are absorbed into the soil particles rather than entering the water.

HABITAT
Vegetation is an extremely important source of habitat for thousands of organisms which live on and among plants. Not only does this vegetation provide shelter and food, but in some cases can create a microclimate which sensitive species may not be able to find anywhere else.

What can I do to help?
- Establish and maintain an adequate buffer zone of native vegetation around coastal dunelakes and tributaries.
- Conserve or restore native emergent vegetation along the shoreline.
- Landscape with Florida native plants.
- Learn to recognize invasive/exotic plants.
- Be careful when ordering plants online – some invasive exotics can be purchased.
- Eradicate all invasive exotic plants.

NATIVE PLANTS
Salt bush Sawgrass
Black Needle Rush Sand Cordgrass
Swamp Rosemallow Marshhay Cordgrass
Duck Potato

EXOTIC/INVASIVE PLANTS
Alligator Weed Common Reed
Cattails Cogon Grass
Torpedo Grass Chinese Tallow Trees

NATIVE VS. EXOTIC PLANTS
An exotic plant is one that is not native to our area, but may survive and thrive here. Exotic plants disrupt the delicate balance of ecosystems by out-competing beneficial native plants, diminishing biodiversity, and reducing food sources and habitat for native wildlife and insects. The most commonly found exotic plants in and around the coastal dune lakes are phragmites, torpedo grass, and Chinese tallow trees. It is also important to note that some native plants can become invasive in the right conditions. For example, there are two types of phragmites reed that can be found locally, one is native and the other is non-native. The phragmites found on a few of the coastal dune lakes has been tested and was found to be of the native variety, but has become very invasive on the lakes and creating dense stands that are choking out other native plant life. It is best to treat and remove these nuisance plants and replace them with beneficial plants native to this area such as sawgrass, duck potato, or swamp rosemallow.
Building a Dock along the Coastal Dune Lakes

Step No. 1: Design & Permitting

WHERE TO PUT YOUR DOCK?
Remember to choose the area of least impact… Per Walton County’s Comprehensive Plan C-1.4.1.1, a maximum 10-foot wide area perpendicular to the shoreline make be cleared to access the water. Additionally, if your lot is located adjacent to a natural outlet of a coastal dune lake, a buffer area of not less than 50 feet of vegetation must be left undisturbed (LDC 4.02.06(B)(9)).

Shoreline vegetation has three main purposes:

- Erosion Control- plant roots help keep soil in its place preventing erosion.
- Water Quality- plants absorb nutrients and pollutants from the water creating cleaner water.
- Habitat for fish and wildlife- many different fish and wildlife species use the herbaceous area around water bodies as a source for both food and habitat.

WHAT SIZE DOCK DO YOU WANT?
All docks on coastal dune lakes no matter the size requires a letter of permission pursuant 33CFR 325.2(e)(1) from the Army Corp of Engineers.

Remember the smaller the dock the less of an impact… Per 403.813(1)(b), F.S., no permit is required for the construction of a dock that is:

- 500 sq. ft or less if located on an Outstanding Florida Water.
- 1000 sq. ft or less if not located in an Outstanding Florida Water

Any dock larger than what is exempt by Florida Statutes will require a permit from the Florida Department of Environmental Protection (FDEP). Additionally, any construction activities on sovereign submerged lands require authorization from the FDEP Board of Trustees.

ADDING ELECTRICITY AND/OR WATER TO YOUR DOCK DESIGN?
If you decide to wire electricity and/or water to your dock, contact Walton County’s Building Division, at 850-267-1827 for specific building permit requirements.
**Step No. 2: Construction**

**THINK BEST MANAGEMENT PRACTICES:**

To prevent shading of aquatic vegetation:
- Elevate docks a minimum of five feet above mean ordinary high water line.
- Keep docks as narrow as possible (typically three to four feet wide maximum).
- Keep plank spacing between 1/2 inch and an inch.
- Limit the length of the dock to the minimum needed to reach navigable waters.

Recommendations to help prevent water quality impacts:
- Use environmentally responsible construction materials: UTILIZE recycled plastic, composite decking, plastic, metal, concrete pilings, or untreated wood (e.g. black walnut, white cedar, chestnut).
- AVOID the use of oil-based preservatives (e.g. creosote or pentachlorophenols) and Chromated-Copper-Arsenate (CCA) treated materials.
- Utilize sediment and erosion control mechanisms (e.g. floating turbidity barriers, silt fence) while doing any activities adjacent to or within the water body.

**Step No. 3: Finishing Touches & Thoughts**

Many properties located on the coastal dune lakes are visible from the beach, therefore any lighting on the property may be subject to Walton County’s Wildlife Lighting Ordinance 2009-03 to minimize disturbances to nesting sea turtles, their hatchlings, and other coastal wildlife. Remember keep it low, shielded, and long, which means mount all lights as low to the ground as possible, shield all light bulbs and glow lenses, and use long wavelength “turtle friendly” light bulbs.

Per Walton County’s LDC 5.09.03, dock lighting is subject to the following provisions:
- Lights shall be turned off after 10:00 PM or when not in active use.
- Security lighting shall be placed on motion sensors with a five minute shut off after activation has ceased.
- All lighting shall be full-cutoff, low pressure sodium, or LED lights.

**Managing non-native/invasive vegetation:**

Removal of non-native/invasive vegetation can be permitted through the Florida Fish and Wildlife Commission (68F-20, F.A.C.).

The use of seawalls, bulkheads, revetments, and rip-rap is prohibited (Walton County Policy C-1.4.1:5). All coastal dune lakes are located within the White Sand Protection Zone per Walton County’s LDC 4.07.00, which prohibits any deposit of fill material that is capable of staining the natural white sands of Walton County beaches. Any fill material placed on the property must be approved by the County Engineer.