

# PROTECT THE WATERFRONT



## LANDSCAPING PRINCIPLES FOR FLORIDA-FRIENDLY YARDS

<http://www.dep.state.fl.us/secretary/watman/>



## PROTECT THE WATERFRONT

Waterfront property owners have firsthand knowledge of the special contribution lakes, ponds, rivers, streams and lagoons make to Florida's quality of life. Florida-Friendly Yards located on a waterfront must address certain challenges and responsibilities. As next-door neighbor to these natural resource treasures, you must make it your mission to practice good environmental stewardship.

To design and maintain a landscape that borders a waterfront of any sort requires a strong focus on the natural environment, as well as on environmental impact. If you presently live on the waterfront or are considering moving to a waterfront location, review these points to make the most of your landscape — to create a yard that is beautifully functional for you and environmentally safe for the natural resources of our state.



Photo by: Jim Phillips

*Homeowners are encouraged to leave a minimum of a 10-foot low impact zone along the waterfront to protect the water from pollutants.*

## Saltwater Considerations

Naturally sloping shorelines, particularly when buffered by a fringe of mangroves or marsh grass, help smooth out waves and reduce cloudiness in the water. In addition, mangroves and other shoreline plants contribute to the food web, attract wildlife such as wading birds, and help prevent erosion at the water's edge.

The area in which shoreline plants grow is known as the **littoral zone**, the boundary between land and water. Unfortunately, seawalls have traditionally been placed directly in this intertidal, littoral zone. If you desire to restore a natural shoreline with natural vegetation, you face a complex decision. Begin



**Florida's Wetlands:**



by inquiring about your city and county ordinances to determine whether removal is an option.

If you can legally replace a shoreline protection structure with a natural littoral zone along your property, your options will be limited by several factors:

1. Depth of your lot
2. Distance from the waterline to upland structures
3. Wave impact against your shore
4. Your budget
5. Shoreline condition of neighboring properties



Photo by: UF/IFAS

*Container garden along a seawall of the intracoastal waterway.*

Shoreline protection alternatives comprise very site-specific considerations, and you need expert advice. The Florida Sea Grant Marine Extension agent in your county, natural resources employees of local governments and the Florida Department of Environmental Protection are good places to find help and information. Keep in mind that submerged land is probably not your property, but belongs to the State of Florida. For information on permitting requirements, contact the Florida Department of Environmental Protection office in your area.

## FYN Glossary Box



**Littoral zone:** the area between high and low tide in coastal waters, or the shoreline of a freshwater lake



## Those Marvelous Mangroves

Beauty, wildlife value and erosion protection make mangroves an asset to a Florida-Friendly Yard. Florida has four native mangrove species:

- n Red mangroves (*Rhizophora mangle*) usually live closest to open water. They have arching red prop roots, and their seeds look like green cigars.
- n Black mangroves (*Avicennia germinans*) typically grow further upland than red mangroves. Taller than their red and white cousins, black mangroves are the most cold tolerant of the mangrove species found in Florida. Black mangroves send up nobby projections called pneumatophores, which provide oxygen to the tree's roots.
- n White mangroves (*Laguncularia racemosa*) are usually found at higher elevations, interspersed with black mangroves.
- n Buttonwood (*Conocarpus erectus*) is not considered a true mangrove by some scientists. It grows most landward of the mangrove species. Once established, it is quite drought resistant and can also withstand flooding, making it an ideal landscape plant for coastal areas.

Some mangrove pruning requires a permit, and the rules are periodically



Photo by: Greg Ira, FDEP

Mangrove seedlings.



Photo by: Greg Ira, FDEP

Pneumatophores are sometimes called knees.



Florida's Springs:



revised. Homeowners and the individuals they hire to trim their mangroves are jointly responsible for trimming mangroves appropriately. The booklet *Mangrove Trimming Guidelines for Homeowners* is available at FDEP's district offices throughout the state. You can read these materials online at <http://www.dep.state.fl.us/water/wetlands/mangroves/mangrove.htm>.

If you have mangroves, contact the following organizations for information on properly managing these fascinating plants: Florida Sea Grant Extension Program, Florida Department of Environmental Protection and your local government's natural resources department.

## Freshwater Considerations

Lakes, rivers, streams and ponds also have littoral zones, which offer many benefits. Littoral zones:

- n Slow the velocity of runoff
- n Filter nutrients and sediments from runoff
- n Hold soil in place

To protect a freshwater resource from nutrient and pesticide runoff, designate a "maintenance-free zone" of at least 10 feet between your lawn or landscape and the water body. Don't mow, fertilize or apply pesticides to the littoral zone.

Enhance natural wetland vegetation with additional plantings. The FDEP's book, *Florida Wetland Plants: An Identification Manual*, is an excellent reference source for information on plant materials.

## Man-Made Lakes and Ponds

If your property does not border or contain a natural waterway, consider



*Fragrant white water-lilies (Nymphaea odorata) growing in a man-made stream.*

<http://floridasprings.org>



building one. A pond is relatively easy to maintain, and it can add value, beauty and ecological soundness to your Florida-Friendly Yard. It does not matter whether your pond measures in square feet or acres, it will contribute significantly to wildlife in your area.

Selecting a good pond site requires evaluating many factors, including slope, soil type, water table, septic tank and house foundation setbacks, and utility easements. When planning, try to strike a balance between what your permit allows and what would fit most naturally into the landscape.

In nature, Florida lakes and ponds feature some common characteristics:

1. They are usually located at the lowest elevation in a landscape.
2. They have a high edge-to-depth ratio — that means that they are wide and shallow.
3. A shallow depth increases the amount of littoral shelf area — the area receiving maximum sunlight penetration. The shelf area provides a place for plants to root and quickly becomes a beehive of pond life activity. Florida ponds less than four feet deep often exhibit complete plant coverage. (It takes 6–10 foot depths to maintain open water.)

## Stormwater Control Ponds (Retention Ponds)

If you live on a waterfront, evaluate stormwater runoff patterns to determine if you are inadvertently “dumping” runoff from your landscape directly into the natural waterway. One way to filter runoff is by installing a series of swales and channels, followed by a small pond as a final collection point for runoff.

A pond provides a natural filter for potential waterway pollutants. Vegetation and filter traps act as active filtration systems for pollutants, and the settling action in the pond itself serves as another way to remove pollutants. A well-built pond that supports plant life can significantly improve the quality of water draining into Florida’s waterways.

Another advantage these systems offer is extending the “soak time” of stormwater, or increasing the amount of water allowed to percolate. Water that percolates through soil recharges ground water directly, as opposed to water that empties into waterways.



UCF Stormwater Management Academy:



If you find yourself managing one of these natural stormwater filtration systems, follow our do's and don'ts checklist to maintain them properly:

## POND MANAGEMENT DO'S

- n DO plant appropriate aquatic, emergent and upland vegetation — they stabilize soil greatly.
- n DO use pond water for non-potable irrigation needs.
- n DO fertilize surrounding areas with the least amount of fertilizer possible, always using a slow-release type.
- n DO use organic compost in lieu of fertilizer.
- n DO use mulch around plants to retain moisture.
- n DO keep pet wastes out of water bodies.



*Shallow ponds, typical in Florida, allow sunlight to penetrate the bottom.*

## POND MANAGEMENT DON'TS

- n DON'T allow livestock to graze pond bank sides.
- n DON'T swim in or eat fish caught in stormwater ponds.
- n DON'T allow invasive plants to clog waterways.
- n DON'T direct grass clippings into stormwater ponds.

<http://www.stormwater.ucf.edu/>



## Seasonal Ponds

A common pond type — and perhaps the easiest to imitate as a yard feature — is a shallow “seasonal” pond, typically 2'–5' deep and 25'–150' across. Variations in seasonal rainfall cause fluctuations in water level, appearance and function.

In winter, standing water recedes, often drying down completely, depending on the pond's water depth, soil type and the local water table. But even in this “dry-down” condition, a seasonal pond offers moisture sources, the damp habitats required by many amphibians, reptiles, birds and small mammals.

### **If you wish to construct a pond to replicate these important habitats, choose an area that:**

- n accommodates the shallow and wide profile
- n already contains suitable plant life and soil types
- n provides access for wildlife

## Conclusions: Connecting Our Yards to Florida's Waterways

The future of Florida's treasured water resources begins in your yard. The decisions you make — from developing a home site, to landscaping your yard, to fertilizing your lawn — actually influence the health of Florida's natural waterways. Nature doesn't recognize property lines. A rainstorm can wash bare soil, landscape debris, gas, oil, fertilizers or pesticides from one yard to another. A butterfly attracted to one person's wildflowers can flit across a property line into another landscape. Landscapes do not just connect people to the outdoors; they also connect one person's property to the next, forming neighborhoods. Ultimately, yards and neighborhoods are connected to water resources. This connection may be immediate, as in a waterfront community, or gradual, through the flow of storm drains, ditches, streams, rivers and ground water.

For more information on Florida-friendly landscaping, contact the FYN Coordinator at your county's UF/IFAS Extension office (find contact information at <http://solutionsforyourlife.ufl.edu>) or visit the state FYN website at <http://fyn.ifas.ufl.edu>.



EPA, Locate Your Watershed: <http://cfpub.epa.gov/surf/locate/index.cfm>

