

CREATION AND MAINTENANCE OF PLANTED LITTORAL ZONES

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Planted littoral zones provide a means for pollutants in stormwater to be removed from the environment. As stormwater is flushed into detention ponds, some of the pollutants settle out into the sediment. One of the goals of detention ponds is to provide an area to improve water quality treatment before release into canals or other receiving bodies. As has been shown by the Everglades Nutrient Removal Project and the Stormwater Treatment Areas, pollutants can effectively be removed by plant uptake. Planted littoral zones help remove pollutants from the sediment and achieve the goal of improved water quality.

Planted littoral zones promote bank stabilization. Most ponds provide for a 4:1 side slope. Due to the type of soils found in South Florida, because of wave action and upland runoff, side slopes tend to recede from the banks of the pond. Planted littoral zones are very efficient in maintaining side slopes and planted littoral zone side slopes are more gradual in that they are required to be at least a minimum 10:1 slope.

Planted littoral zones provide a seed source. As littoral zones are planted, the new plants themselves provide a natural seed source. The seeds allows for enhanced volunteer recruitment for native plants in the unplanted remainder of the pond.

Planted littoral zones provide habitat. In most cases, when stormwater ponds are created, they are created from wetland and upland areas which were maintaining a habitat for numerous aquatic and land creatures. When ponds are completed, they are sterile and virtually no indigenous creatures remain. Planted littoral zones provide a place for fish and other aquatic life to find a safe haven and a food source while growing to maturity.

Planted littoral zones provide foraging areas for waterfowl. As small fish and other aquatic life find safe haven in planted littoral zones, wading birds find a source of food. Since many of the wetland pools have either dried up or been removed from use by development or exotic plant invasion, planted littoral zones help offset that loss. Homeowners have often informed ERM staff that within two days of the planting of littoral zones, wading birds have appeared.

Planted littoral zones have to be maintained free of nuisance plants. Planted littoral zones are allowed up to 10 percent coverage by nuisance plants. Three of the more prevalent nuisance plants found in ponds harbor notorious biting mosquitoes. Hydrilla, water lettuce and cattails are all host for the larval stage of mosquitoes. These larvae attach to the roots, receive nourishment, and hide from predators. The mosquito fish, *Gambusia sp.*, is unable to get into the roots and eat the larvae. Therefore, the biting mosquito population is able to increase nearly unabated. Maintained planted littoral zones provide mosquito fish with a safe haven, provide food for waterfowl and help protect surrounding areas from mosquitoes. Another highly invasive nuisance plant, torpedo grass, can rapidly out compete native plants if left unattended. Failure to maintain nuisance plants increases unwanted seed sources which, in turn, can spread throughout the planted littoral zone, the remainder of the pond and surrounding aquatic community.