

## **OAKLEAF ALERTS**

### **Oakleaf Lake and Ponds**

#### **Aquatic Systems Report**

In the Oak Leaf community there is a notable population of native aquatic plants within some of the storm water retention ponds. These plants are mostly found in the littoral areas, which are shallow portions of a pond that are specifically designed to support the continued growth of aquatic plants. These areas are typically not more than two feet deep and are most often located near the outfall point of the pond for water discharge.

The placement of these littoral areas was determined during the engineering phase of the construction and in each of the three ponds is located in a different area of the pond. The littoral areas are indicated on various maps that are available for the community.

Littoral areas serve as two functions in Oak Leaf. The first and most important function is storm water treatment. The aquatic plants in the littoral areas help to filter nutrients and pollutants that enter the ponds from the surrounding areas. Everything that goes onto the ground in Oak Leaf, including fertilizers, pesticides, or oil from cars and trucks enters the storm water ponds. There are some simple and some very complex biological processes that occur, but in short the plants help to clean the water before it leaves Oak Leaf. Ultimately the water from the ponds enters our bays, rivers, oceans, and even our drinking water, so treatment is an important function of the littoral areas.

The second important function of the littoral areas in Oak Leaf is to serve as a vital habitat for wildlife such as fish, birds, and insects that would otherwise be displaced by the spread of development.

In most cases, the aquatic plants in the littoral areas seek their own boundaries and are limited in growth by water depth. With the exception of two species, Fragrant Water lily and Spatterdock, most aquatic plants can only grow in water that is two or less in depth. This means that they will spread to find these shallow areas that include the immediate shoreline to maximum depth of approximately two feet.

In the cooler months some of these aquatic plants may go through a stage of dormancy and turn brown, however, once the temperatures begin to increase again they bounce back to their green luster.

There are specific requirements set forth by governing agencies such as the South West Florida Water Management District (S.W.F.W.M.D.) and Sarasota County, regarding vegetation in the littoral areas. The requirement for Oakleaf is that 85% of the designated littoral areas must be covered by emergent native aquatic plants and no more than 15% may be occupied by undesirable species.

The littoral areas were under a monitoring requirement for Sarasota County several years back but we were able to successfully get them released, under unique circumstances, when they met the above noted criteria.

Over the years this coverage has declined but in several areas within the ponds along the shoreline, plants have naturally and successfully recruited there. This additional coverage outside of the littoral areas may help to make up what is lacking in the littoral areas themselves, should the need arise for further monitoring in the future.