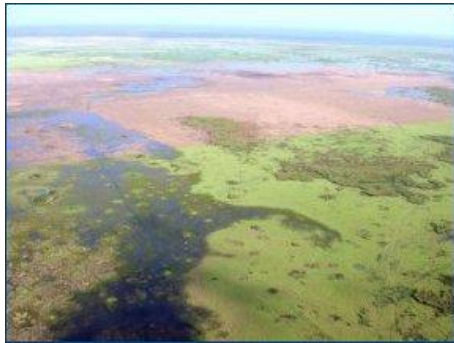

LAKE OKEECHOBEE PRIMARY EXOTIC SPECIES CONTROL

Okeechobee In-Lake Torpedograss:

Torpedograss (*Panicum repens*) is an invasive exotic plant that has severely threatened the marsh ecosystem in Lake Okeechobee. During the past 25 years, more than 18,000 acres of diverse native plant habitat has been replaced in the lake by the rapid spread of torpedograss. When torpedograss reaches a high density, it turns productive marsh areas into thick matted stands of vegetation resembling hayfields. The areas no longer can function as habitat for sport fish or other wildlife when they reach this state. Torpedograss is thought to reproduce primarily by fragmentation or from underground rhizomes that contain numerous axillary buds. To control a rhizomatous species such as torpedograss for a relatively long period of time, the rhizome and buds must be destroyed. Fire alone usually will not control torpedograss because the underground rhizomes often are insulated from the damaging effects of fire. However, fire does reduce above ground plant biomass and treating regrowth during the early stage of development following a burn has proven to be an effective way to control torpedograss in Lake Okeechobee.

Low water levels in the marsh this summer created favorable conditions for the burning of torpedograss. On July 20, 2000, a prescribed fire was used to burn 800 acres of torpedograss east of the Moore Haven Canal. On July 22, 2000, a wildfire burned 700 additional acres in the marsh just south of Indian Prairie Canal. Torpedograss regrowth in the burned areas will be evaluated frequently. When new plant growth reaches a height of about 4 inches, 1,000 acres of torpedograss will be treated with herbicide. Five hundred acres will be treated near Moore Haven and another five hundred acres will be treated south of Indian Prairie Canal.

Restoring areas that have been impacted by torpedograss and preventing the further spread of this exotic plant is critical for the management and protection of valuable fishery and wildlife habitat in Lake Okeechobee. Plans are being developed to burn an additional 3,000 acres of torpedograss near the Moore Haven Canal and to control a number of small torpedograss islands in Moonshine Bay, a valuable fish and wildlife habitat that now is being encroached upon by the exotic plant.



Torpedograss Treatment, July 2002

Okeechobee In-Lake Cattail:

The distribution of cattail in Lake Okeechobee has changed in recent years due mostly to changes in environmental conditions. In the late 1990s, hundreds of acres of cattail were uprooted along the lakeward edge of the marsh during a prolonged period of deep flooding and exposure to wind generated waves. Later as lake levels approached record lows early in 2001, a series of fires burned thousands of acres of cattail, some down to the mineral soil.

During the past twelve months much of the marsh has become inundated once again. During the recent transition back to inundated conditions, thousands of acres of submersed and emergent plants including eel grass, pepper grass and spikerush have returned to South Bay, Cody's Cove and many other areas of the littoral zone. These plants are considered desirable because of the benefit they provide to water quality, fish and other wildlife. In addition to the beneficial plants already mentioned, dense stands of cattail have become dominant through much of Bay Bottom on the south end of the lake and near Cody's Cove and Kings Bar on the north end of the lake.

Although cattail is a native plant, it can become a serious weed problem. The cattail communities now expanding in Bay Bottom and the King's Bar area of the marsh will potentially shade out the submersed plants that have become established in these areas. Replacing marsh habitat dominated by eel grass, pepper grass, spikerush and open water with dense cattail will have a negative impact on water quality and wildlife habitat. In addition, access to recreational boaters and anglers also will be restricted.

In order to protect and restore quality fish and wildlife habitat in Lake Okeechobee, the District is treating approximately 2,000 acres of new cattail growth. August cattail treatments included, 1,140 acres in Bay Bottom, 400 acres near King's Bar and Cody's Cove and 100 acres near the Monkey Box (see photos). The treatment sites were selected based on cattail dominance. Only heavily impacted areas were treated. Areas that contained a low to moderate cover of cattail and a mixture of other emergent plants such as spikerush were avoided. Cattails were treated aurally with the herbicide glyphosate (RODEO). Glyphosate was selected because it effectively controls cattail without harming submersed plants. In some treatment areas, spikerush occurred beneath the cattail canopy but it was not considered a dominant plant. During our first inspection two weeks post treatment, no damage was evident on the exposed spikerush. We will continue to monitor treatment efficacy and evaluate long-term changes in plant community composition within the treated areas.



Treated Cattail Southwest End of King's Bar, October 2002

Okeechobee In-Lake Brazilian Pepper:

Brazilian pepper is an exotic tree that expands rapidly and has become a major environmental problem throughout South Florida. Dense stands of Brazilian pepper trees form thick canopies that displace native wetland and upland plant communities and seriously degrade wildlife habitat. In Lake Okeechobee, Brazilian pepper is present in most of the elevated and disturbed areas including tree-islands, canal banks and levees. Previous exotic vegetation management practices in Lake Okeechobee did not include the control of Brazilian pepper due to the lack of suitable herbicides registered for use in aquatic environments. However, as a result of low water levels associated with the lake recession, most of the Brazilian pepper trees now are exposed in dry areas of the lake's marsh.

Taking advantage of favorable treatment conditions, the South Florida Water Management District and the Army Corps of Engineers crews and contractors aerielly treated 615 acres of Brazilian pepper trees around tree islands and other elevated areas within the western marsh during June and July, 2000. Ground crews treated an additional 120 acres of Brazilian pepper along sections of the rim canal, Old Moore Haven cut, Mayaca cut, Harney Pond, Indian Prairie and Pierce canals. The treated areas will be monitored for plant regrowth (native and exotic) and to determine future treatment needs.



Live and Treated Brazilian Pepper Trees on Lake O