



Southeast District  
Assessment and Monitoring Program  
**Ecosummary**

## Chandler Hammock Slough

Okeechobee County

September 1999



**Summary:** Chandler Hammock Slough running through improved pasture. Current water quality status: **IMPAIRED**.

Chandler Hammock Slough is approximately four miles long with an average depth of 1 meter. It is located to the north of Lake Okeechobee and runs northeast between Turkey Slough and Taylor Creek. Chandler Hammock Slough discharges into Taylor Creek, which in turn discharges into Lake Okeechobee. During a May, 1999 sampling trip, the water in this slough was reduced to a string of black, turbid puddles with a strong odor of cattle feces.

The majority of the surrounding land uses are dairy farms, beef cattle farms and improved pasture. A small



*Chandler Hammock Slough is but one of an interconnecting network of sloughs, low areas, natural creeks and man-made canals that drain to the Kissimmee River and Lake Okeechobee.*



*Chandler Hammock Slough during high water flows to the Kissimmee River and Lake Okeechobee.*

**About the Lake:** Human impacts particularly in the latter part of this century have resulted in the deterioration of the Lake Okeechobee ecosystem. Excess nutrient loading has caused an increase in the frequency and intensity of algal blooms, an indicator of lake "hypereutrophication". This trend is attributed to increased total phosphorus inputs and a reduction in the lake's ability to assimilate phosphorus. Total phosphorus concentration in the lake has approximately doubled since 1973 when the lake phosphorus concentration was 0.049 mg/l.

percentage of land use around the slough is residential and swamp. A portion of Chandler Hammock Slough is channelized through some of these dairy farms, and there are no fences to keep livestock out. This results in erosion, increasing downstream sediment loads and decreasing shoreline stability. Cattle may also defecate directly into the slough. Runoff from dairy farms and cattle ranches is delivered directly into Chandler Hammock Slough which in turn results in a depleted dissolved oxygen regime and poor water quality. Recent observation indicate a dissolved oxygen concentration of a mere 0.6 mg/l. These results are far below the state standard of 5.0 mg/l.

Chandler Hammock Slough retains very little native wetland vegetation that would allow it to sequester and absorb the massive amounts of nutrients it receives. These wetland plants have generally been removed in order to create improved pasture for beef cattle production.



*Chandler Hammock Slough on its way towards the Kissimmee River during August, 1999.*

**Recent FDEP sample results for May 18, 1999**

*Dissolved Oxygen - 0.6 mg/l (violation)*

*pH - 5.7*

*Conductivity - 416 umhos/cm*

*Total Phosphorus - 5.78 mg-P/l*

*Total Nitrogen - 6.22 mg-N/l*

*Inorganic Nitrogen - 1.16 mg/l*



*Chandler Hammock Slough contains one of the highest observed concentrations of both nitrogen and phosphorus nutrient in the basin.*

**For more information:** Contact the Southeast District Surface Water Quality section in Port St. Lucie at 561/871-7662, or by email:

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