
LAKE OKEECHOBEE WATERSHED LAND USE CHANGE EVALUATION PROJECT

Mandate:

Lake Okeechobee Watershed Protection Program (LOWPP)

Background:

Over the past thirty years, excessive phosphorus loadings have adversely impacted the ecology of Lake Okeechobee. Non-point source pollution generated by numerous land use activities is a major phosphorus source. To address this problem, the Florida state legislature enacted the Lake Okeechobee Protection Program in the year 2000. One program component states that prior to authorizing a discharge into the Works of the District, the District shall require responsible parties to demonstrate that proposed changes in land use will not result in increased phosphorus loading over that of existing land uses. In response to this legislation, the District has initiated a program to help land owners and their consultants determine whether proposed land use changes cause increased phosphorus loadings.

Project Overview:

This project is implemented in four phases. Under phase one, District staff will estimate whether a land use change causes decreased phosphorus loads leaving an applicant's property, if requested by a Works of the District permit applicant. Estimates are conducted with computer models, such as CREAMS-WT. The remaining phases are oriented towards shifting the responsibility of estimating land use change impacts from District Staff to permit applicants. The second phase recently was completed and identified reliable methodologies that a permit applicant can use easily to estimate land use change impacts. This phase was completed with assistance from Dr. Raghavan Srinivasan of Texas A & M University. The third phase is being conducted now by District staff and involves implementing methodologies identified in phase two. Support documentation and computer software are being developed, to make methodologies very user friendly for permit applicants. The final phase includes maintaining the documentation and software developed in phase three, and providing user assistance to permit applicants. Once the last phase is implemented, phase one will be discontinued.

Application of Results:

Methodology documentation and support software developed through this project will be used by Works of the District permit applicants to demonstrate if land used changes on their properties may cause decreased offsite phosphorus loads.

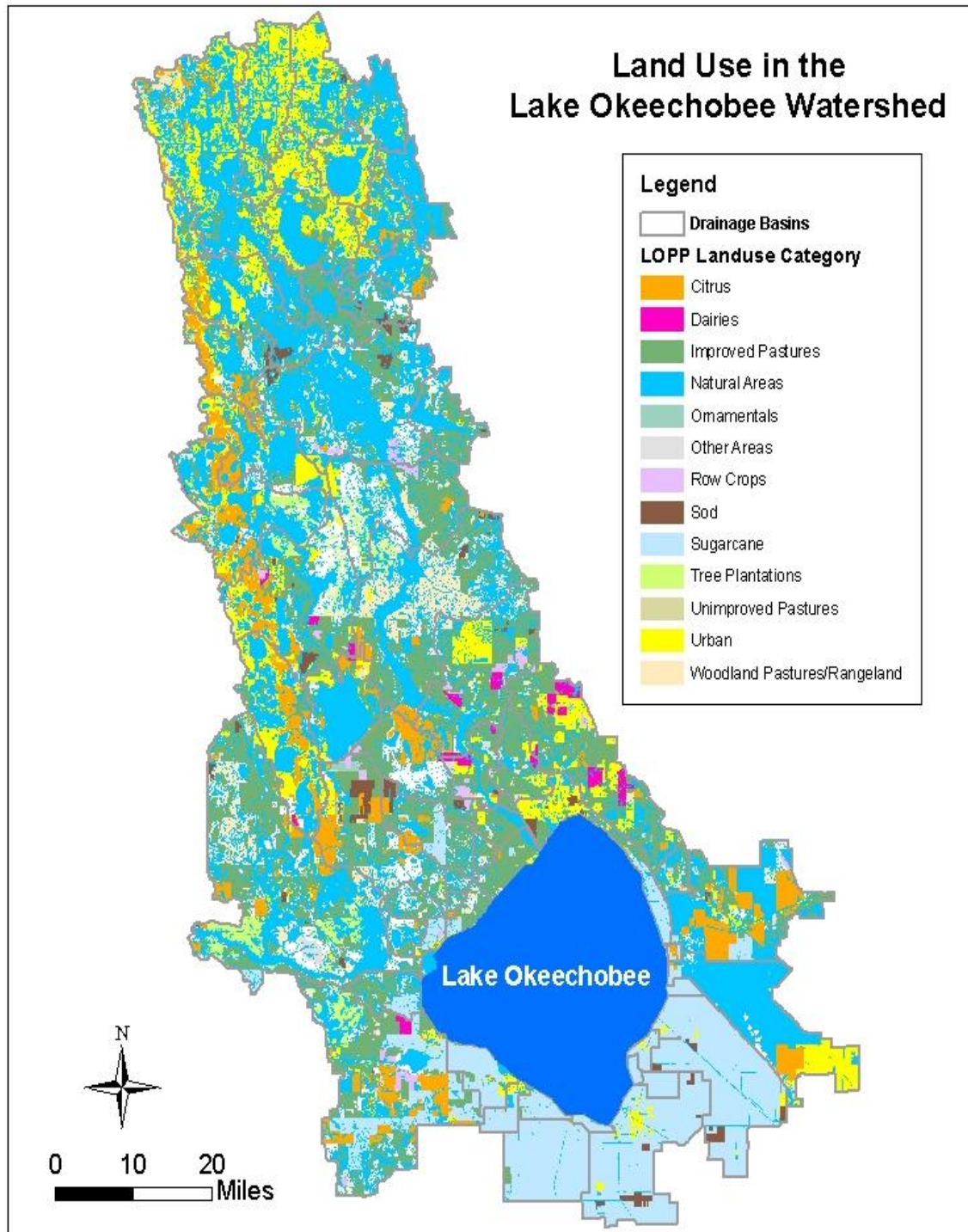


Figure 1: Lake Okeechobee Watershed Land Use Map, 2006