Sustainable Development in South Florida: Reconciling Everglades Restoration Efforts With a Growing Urban **Development Trend**



While there are some outliers in the two classification fields, for the most part rankings attributable to proximity to developed residential land and roads are inclusive of each other. This finding is expected and can be affirmed logically by the tendency of existing residential land to be located near roads. It is also interesting to note the higher density of roads and developed land near coastal areas, which is historically where a higher density of development occurs. If future development is to occur with having the least affect on the Everglades ecosystem, these encouraging criteria must be included in site analysis.



Encouraging Criteria: Proximity to Roads and Already Developed Residential Lands Analysis

Encouraging Criteria: Proximity to Densely Populated Areas

Population density is used as an encouraging criterion in order to determine the areas which will likely need more accommodations to support its population. Although not of great importance to environmental concerns, it is valued for its use in effective planning purposes. In the district focused on in this study, there was a significant difference in population densities across counties. Furthermore, the only county to satisfy the encouraging criteria of density above 10 per square mile and density above 20 was Palm Beach. By determining which developable residential lands that had a rank of 1 across aforementioned encouraging criteria intersected with the most preferred population density, the final set of absolute most preferred sites for development based on the goal of this analysis were determined.



Purpose:

This project aims to reconcile the essential need to pre-25,000 Meters serve the quality of the Everglades area and the wildlife it houses with the growing trend towards South Florida urban development. Its goal is to spatially identify the best locations for future residential development in the areas of South Florida which border Lake Okeechobee and the Everglades with least impact on important ecological zones. In this way, development can occur to provide for growing populations in the area while having minimized adverse effects on the Everglades and plans for its restoration.

Methods:

In an effort to identify the lands most suited for sustainable development in the South Florida counties of Martin, Indian River, St. Lucie, and Palm Beach, this project incorporated a number of environmental constraints on development. These environmental major constraints consisted of CERP boundaries, priority wetlands habitat, strategic habitat conservation areas, conservation lands, state forests, and critical linkages. These Constraints were compiled into one single layer and then erased from the derived developable residential lands layer to determine the working set of developable lands for this analysis. From there, the developable lands were evaluated based on buffer analysis according to encouraging criteria consisting of proximity to roads, already developed residential areas, and areas of high population density. The best possible sites for development were ultimately determined by finding the developable residential lands which satisfied the most preferred conditions or rank for all 3 encouraging criteria. For a more detailed methodology, see accompanying project paper.

Absolute Constraints On Development









The Florida Everglades is a wetland area located in South Florida which is home to a diverse population of plants and animals. These populations depend on the unique ecosystem provided by the Everglades for their survival. With growing human activity and deelopment in climate-appealing South Florida, the quality of the Everglades nas largely decreased, endangering its mportant ecological zones. Much of he downfall of the Everglades quality has been linked to urban development n south Florida and the falling quality of urban life in the area. Furthermore, past Everglades draining practices to rovide water for agricultural and residential purposes has severely decreased he water supply of the area. The Florda Everglades has been listed by JNESCO as one of the 3 wetland areas f global importance, and efforts to proect its quality have culminated in the ubmission to Congress one of history' most expensive and comprehensive environmental restoration plans (the CERP). In order for this restoration plan to be successful, there is a crucial eed to regulate future sites of urban levelopment in accordance with specific environmental constraints which will provide for minimized adverse effects on the Everglades. In this way, continued urban development can exist n accordance with Everglades protecion practices.





12/10/2008 **UEP 232** Source: Florida Geographic Data Library (FGDL.org) Projection—Albers Conical Equal Area

Conclusion:

This fundamental analysis has led to a final data set which encourages future growth in Florida's district 4 to occur mainly in coastal areas of Palm Beach county. Because of its higher population density relative to the other 3 counties of this study, ranking analysis based on the encouraging criterion of population density placed severe limitations on the spatial extent of most preferred developable lands. Therefore, when developing in counties other than Palm Beach, either population density preference ranking should be determined using lower values or preference values based on proximity to Annalisa Gutierrez roads and developed areas should be the determining factor of best future development sites.



- verareen shrub wetland
- slough, bog, or marsh wet prairie, marsh

- uiban/roads, rock, sand