Development Patterns and the Everglades

Florida Earth Project: Restoration Module

Summary of Presentation
Richard Grosso, Executive Director
Environmental and Land Use Law Center, Inc.

Development Patterns - Impacts of Land Use Decisions and Urban Sprawl on Restoration Efforts

1. The impacts of development patterns fall into two categories:

A. Past Decisions

The challenge is to, in a few places undo past decisions, and in most others, to reduce the negative impacts of past decisions, by changing the expectations that those prior decisions have fostered and reducing the impacts they have created.

B. Current and Future Decisions

The challenge is to learn from prior mistakes and experiences and make the hard decisions that were not made in the past. An open question is whether existing governmental structures and political will is up to the task.

2. Discussion of Past Decisions

A. Diking of Lake Okeechobee

Allowed settlements and farms to surround lake, which restricts management for full ecological function, and which create de-watering (euphemistically called flood control) requirements and consumptive water use needs that are potentially mutually exclusive with the water needs of the natural system.

B. Drainage of central Everglades to allow development and farming.

Throughout Palm Beach, Broward, and Dade counties predominantly, there are now millions of people living and doing business, and engaging in large scale agriculture on ground that was historically was roughly one half of the Everglades. Thus, the restoration of the Everglades means essentially that we are trying to re-create all of the basic functions of the historic ecosystem in an area only half the original size. Additionally, restoration of areas not already developed is compromised because such restoration increases groundwater levels in the developed and farmed areas nearby, causing

flooding conflicts. Agricultural practices have also evolved to deep rooted crops as farmers became accustomed to artificially lowered groundwater levels. Those urban and agricultural uses also create demands for potable water that may not leave enough left for the basic hydrologic needs of a restored Everglades. Finally, the economic and political influences that drained the Everglades to make way for homes, businesses and farms are not all that different today.

C. Urban Sprawl

This is essentially the same problem as that discussed above, but merits separate discussion because the financial and political realities make acquisition of these areas to revert the back to ecological or water storage function virtually impossible. Agricultural areas may still be within the political and economic reach of acquisition agencies.

D. West Miami Dade County Lakebelt

The prior relaxation of wetland laws to allow financially lucrative limerock mining in Western Miami - Dade County has, and continues to allow the destruction and likely permanent loss of approximately 21,000 acres of Everglades wetlands.

3. Discussion of Current and Future Decisions

A. Diking of Lake Okeechobee

Can these impacts be reduced if significant parts of the Everglades Agricultural Area are taken out of production and revert back to the water storage function (the historic ecological function probably cannot be replaced due to soil subsidence) it historically held? Then, lake levels could be reduced such that the lake regains its ecological health, perhaps even to the point that the dike is no longer needed to protect surrounding homes from flooding.

B. Drainage of central Everglades to allow development and farming.

The restoration will breach some levees, and fill in some canals, and water levels will be increased in places to improve natural hydrologic conditions. The maximum benefits of these efforts can be realized if agricultural practices can be shifted in places to those which are compatible with higher water levels, and if urban communities can maintain their internal drainage features more effectively and understand that, in many places, it is natural for standing water to exist for several days after big storms.

Land acquisition must also be maximized, and quickly, given the great market demand for housing in the region. This is necessary to give the architects of a restored system the greatest spatial extent with which to

work. For those areas that are already developed, per capita water consumption needs to be reduced through improved landscaping (native), less wasteful water use practices (smart lawn and landscape watering, less frequent car washing, less daily waste, etc.). This may require changes in state and local laws, but hopefully not. Finally, for those areas that are still going to develop, development standards need to maximize open space, water recharge area preservation, wetland buffers adjacent to other natural areas, and other features that contribute, on a cumulative basis, to the restoration of the ecosystem. Finally, decision-makers need to understand the economic benefits of a restored ecosystem and the political dynamic must reflect the imperative to restore the system. That means influences that drained the Everglades to make way for homes, businesses and farms are not all that different today.

C. Urban Sprawl

Local governments with jurisdiction over the private lands within the eastern fringe of the Everglades must not increase land use densities in these areas, and must in fact use tools such as land acquisition, transfer or purchase of development rights, and "down - zonings" to maintain the ecological status quo and maintain opportunities for restoration of these lands. The state must use its oversight authority to ensure that this happens. Where development is permitted, development standards must ensure maximum mitigation for hydrologic and wetland impacts which is itself accomplished within the same Everglades watershed. In other words, government can (using existing laws) and should prevent further degradation of the system it is attempting to restore.

D. West Miami Dade County Lakebelt

The majority of the area for which mining is proposed has not yet been permitted. Thus, a strict application of wetland protection laws is warranted, and can prevent the worst of the potential degradation. To the extent that mining is allowed, a coordinated government review process should ensure that significant, appropriate mitigation should be required within the same Everglades ecosystem, and the Miami-Dade County well field on site should be given maximum protection from mining related activities. Finally, the combination of mining, mitigation and well field protection must keep any additional urban development away from these Everglades wetlands.