

**Ecological Economics in Florida:
Parks, Rivers, Beaches, and Reefs. Mines, Farms, and Power Lines:
Principles from 10 Recent Interventions**

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In this paper I shall review, case by case, how a radical but conventional economist can fight for environmental justice – and sometimes win. And the winning – and also the lessons—are worth the fight.

Case #1: How Broward County Got Its 100-acre Park.

Our story begins in 2001, with the Developer hiring me , a conventional economist who had computed for the U.S. Army Corps of Engineers, the economic impact of the planned \$13 billion Everglades Restoration. The Developer had an option on 100 acres of pristine land in Central Broward County, and his project was to phase in 10 huge industrial warehouses in this low-income Caribbean and minority neighborhood. An economic study, he thought, would be instrumental in getting the town of Lauderhill to alter its zoning and landscaping regulations and dispense with the required trees and lawns.

At that point, I knew little of the economics of urban parks, but my intuition was to approach my developer with the prospect of his selling his option to Broward County, to be facilitated by the Trust for Public Land, for a 100-acre recreational park. The County already had an unspent bond issue for \$50 million to buy and keep open land.

To my delight and surprise, the Developer agreed in principle, if the County would meet his reservation price, which it did. The problem now lay with the County Commission, which was skeptical of “fast deals” and with the Lauderhill mayor who was really after the taxes an industrial park would bring. A recreational park, after all, is exempt from all taxes. This was in the industrial

zone, on the wrong side of the Turnpike, where the low-life and the poor lived. Lauderhill was counting on the industrial zone to fund its greener side.

My real job was to present two types of information to the County Commission. First, the amenity of a large park raises the land values around the park and generates more tax revenue. A cricket park, moreover, could become the focus for Caribbean tournaments and festivals, a regional development tool and neighborhood improvement.

Second, that minority area was the only region in the County without a regional park, and it was my task to let the commissioners know that they were now exposed to a major lawsuit through neglect and racial discrimination.

I saw before me the commissioners change their vote from “against” to “in favor” of the Park, much to my amazement. Two years ago, the Park officially opened, complete with a world-class cricket field and stadium, a water park, and nature walks, soccer fields, and picnic areas. Please see: <http://www.broward.org/Parks/CentralBrowardRegionalPark/Pages/Default.aspx> and <http://www.youtube.com/watch?v=LPU3WaMXRtQ>.

Principle: Work with all sides of an issue. Do normal economic calculations for impact measures, but be aware of alternative land uses to help the neighborhood as well as the client. Be aware of the issues of racism and “environmental justice.” Neglecting parks in minority areas is illegal in the US, akin to school segregation, and local governments have been sued successfully by civil rights groups.

Case #2: Economics of Everglades Restoration: the Book.

Writing a book on Everglades Restoration was to be, I thought, an instrument, a tool, for the ecological movement. How could there be enough water and land for the 6 million people of South Florida if the economy kept growing, sprawling, spreading? I would make an economic model, using

REMI and IMPLAN, and correct it for tourism, exogenous investment, and agriculture: then people would surely see that we were on a collision path.

Inspired by the work of Duchin and Lange (1994) on the world economy, I needed quantitative testing of the hypothesis that if the cities and the farms kept on growing, and people kept on moving to South Florida, encouraged by the pro-growth government policies, then indeed there could be no water, land, or future for Everglades Restoration.

I have presented this message to professional, university, business, local government, and environmental groups. Is anyone listening? Have the econometric devices -- the hybrid REMI and IMPLAN models -- convinced anybody who doubted the obvious or slowed the bulldozers during the housing boom?

The lesson from the book is the book itself – the pulling together enormous and disparate bodies of data for some 6 million people and put these into a context that would be helpful for people to understand why super-growth has its costs ...down the road. The purpose of the book was to warn against the impending, inevitable crash of a super-charged regional economy with a finite and fragile ecosystem. That crash was to come, but for other reasons.
Case #3: Sierra Clubs & NRDC vs. US Army Corps of Engineers & 4 Limestone Mining Cos.

At the edge of the Everglades, and on the pretense of calling giant quarry pits, “water storage for Everglades Restoration,” the limestone magnates of the world had scooped out a vast area, named it the “Lake Belt,” and then blasted, dredged, washed, and shipped out six daily 100-car “unit trains” of rock to “fill” the swampy Florida lands and ready them for construction. Nobody could stop them, and no government dared. The mines are powerful and rich, and their publicity was that their rock made the homes, roads, hospitals, schools, bridges, and pavement, the liquid stone we call concrete, the foundation of our culture.

The Sierra Club and the Natural Resources Defense Council (NRDC) challenged the permits that allowed this whole operation to proceed. The Federal judge in South Florida District Court found the permits to be illegal and “vacated” them. But could he shut down the mines as a remedy? Were they not too important? Thousands of jobs, the entire construction boom, all depended on their rock exports and their rock products.

Our four lawyers and single economist stood against their 20 lawyers and their economics firm. Our REMI and IMPLAN models, together with Federal mining statistics, now applied to help us measure the true impact of an industry closing in Miami-Dade County, exposed the miniscule employment involved in the industry. Many sources have limestone; in fact, the entire Caribbean is filled with limestone islands, if they were permitted to import their rock to South Florida ports. The local price of rock, moreover, was manipulated by the cartel to keep prices high and exports out.

The entire industry had to be analyzed – a secretive, closed oligopoly, but with plenty of public data and outside sources willing to divulge trade secrets.

In the end, the judge shut down 20% of the mines due also to their jeopardizing the public water supply. But by then, the financial crises also shut down the rest of the mines. No one was going to build anything in South Florida for another decade.

Principle: Big industries exaggerate their own importance to justify their environmental destruction. Their numbers must be invalidated and alternative projections and costs must be shown in order to present a convincing alternative.

Case #4: “Back Pumping” Water from the Sugar Lands into Lake Okeechobee

In South Florida, a huge shallow lake lies west of Palm Beach, surrounded by six large counties. Lake Okeechobee (meaning, “Big Water,” in Seminole Indian language) is the center of bass sports fishing and tournaments. It is also used as a cesspool-reservoir for industrial and farm

runoff when the torrential rains threaten the sugar lands and vegetable fields to the south of the Lake and the cattle and dairy lands to the north. “Back-pumping” water from the sugar fields that would normally flow south into the Everglades robbed the Everglades of its natural flows; and then drawing on the Lake waters during droughts robbed the Lake and the fishing interests of their water. Worst of all were the pesticides that were pumped along with the water into the Lake which is drinking water for the poorer communities around the Lake – again, an issue of environmental justice.

But the South Water Management District had never refused the sugar barons their permits to pump excess water into the Lake...until the summer of 2007.

The politics was changing, and it was an open fight this time. The Florida Governor sent his Commissioner of Agriculture and Consumer Affairs to tell the sad story that without backpumping, there would be no sugar crop. Food prices would escalate; there might be famine in the land. Farmers would go broke and jobs lost.

My job was debunk their assertions, show the true farm statistics, the safety nets for the farmer, the market shares and little employment that could, even in the worst case, be affected.

Principle: A lot of hard work and research is needed to go against the “big guys.” “The harder they come, the harder they fall”... sometimes.

Case #5: Beach Renourishment, Reef Suffocation vs. Leave the Beach Natural

The City of Palm Beach, the richest town in Florida, wanted part of its beaches “Renourished,” that is, covered with new sand, dredged from the ocean. This would extend their beach, but it would also smother the near-shore reef and all the critters that live in it. Off-shore fishing would be disturbed by the dredging for about a year, and the best surfing would be altered by the beach re-contouring.

Never mind, the billions of dollars worth of property would be saved by the beach extension, and that always has made all the difference over the turtles, fish, and grasses that would be smothered. Not this time.

First, I had to show that the real estate studies were inconclusive. There was great value in natural beaches and the sales records showed equal prices for on and off beach condos with the same amenities. Second, the existing employment from near-beach enterprises would be affected, and there was considerable but decentralized income generated in the region. Third, the reef that would be covered and smothered itself was a significant “draw” in the region and no distant artificial reef could match it within a million years.

In the end, the judge denied the permit and beach, the surfing, the fishing remain natural.

Principle: Neutralize the exaggerated claims of the opposition; develop your own projections, and give the judge or jury a chance, then, to look at the science because the “economic imperative” has been removed.

Case #6: Phosphate Mines and the Eradication of Rural Communities in South West Florida

Phosphate mining has destroyed south Polk County and now has requested mining permits to cross into the southern border of Hardee County. I computed the jobs per acre of the land in citrus, vegetables, and cattle using the US Agricultural census and IMPLAN sector employment data for Hardee County to show what history has also shown: the net job loss with mining compared to the direct and indirect linkages associated with family farming. Add to this, the destruction of the underground water supply, the loss of the forests and wetlands with the drop in the water table, and the non-reclamation of the lands when mining is finished.

I testified with similar data in Hardee, DeSoto, and Manatee Counties. No permits were ever denied. Only one court case, which used this information, was successful in delaying mining in Hardee County by a year, until a mediation agreement was worked out.

Principle: Large scale mining is compatible with farm society. But no single agency advocates for the farm society in this conflict. Rather, farm owners openly collaborate in their own destruction by accepting “legacy grants” (bribes) and “compensation” from the mines rather than banning strip-mining totally.

Make field visits, walk the terrain, get old satellite pictures “before and after” to show the destruction of habitat. Visit the habitat with knowledgeable scientists, hunters, and local residents. Take students on field trips.

Case #7: Gulf Hammock and Limestone Mine

A timber company teams up with a limestone mine to turn the Nature Coast of Florida (Levy County) into the Industrial Coast. With a consortium of local property owners (Withlacoochee Area Residents, WAR), I measured the employment involved in the Gulf Hammock forest area, including recreation, hunting, fishing, tourism, and boating. A new nuclear plant is planned nearby, and the limestone mine would feed the construction site. There are four other mines in the area, all working at less than full capacity. The County Commission took five minutes to decide to give the permits, after an 8 hour hearing.

Principle: The game was over before it began. The Commission was ‘fixed’. The exercise was done to prepare for the judicial appeal in state or federal court.

Case #8: Power Lines in South Miami

Another nuclear plant in South Miami would run its power lines above ground through populated communities. I showed the value of the property that would be lost on the basis of the real

estate literature, but how does that translate into jobs? Then we (the class of students involved in this project) designed different scenarios for the impact of a loss of spending power when an upscale district becomes a “power-line corridor”...to nowhere.

Principle: Work closely with citizen groups, and they will use your results and studies too.

Case #9: Big Cemetery Chain vs. Small Residents in a rural area

To protect a neighborhood from a large cemetery operation, I had to compute the true death rates, burial (vs. cremation), and space needs for Miami-Dade County. There was no need for another cemetery! And the County Zoning Board denied the permit.

Principle: It takes a lot of computing to show a company’s claims to be exaggerated. But that’s exactly what’s needed to win.

Case #10: Sand Mine in Indian River County

A shallow sand mine in horse-citrus-vegetable country is challenged by neighboring farms that know their water supply will be affected and noise and dust will become nuisances. Again, the economics traces the direct and indirect job creation in farming vs. mining, and concludes a net job loss.

Nevertheless, the strip-malls need strip-mines, and county commission approved the permit.

Principle: You win some, you lose some. Even if your ducks are all lined up, and the economics and science are on your side, politics and outside factors may over-rule rationality and the long-run social interests.

Bibliography:

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