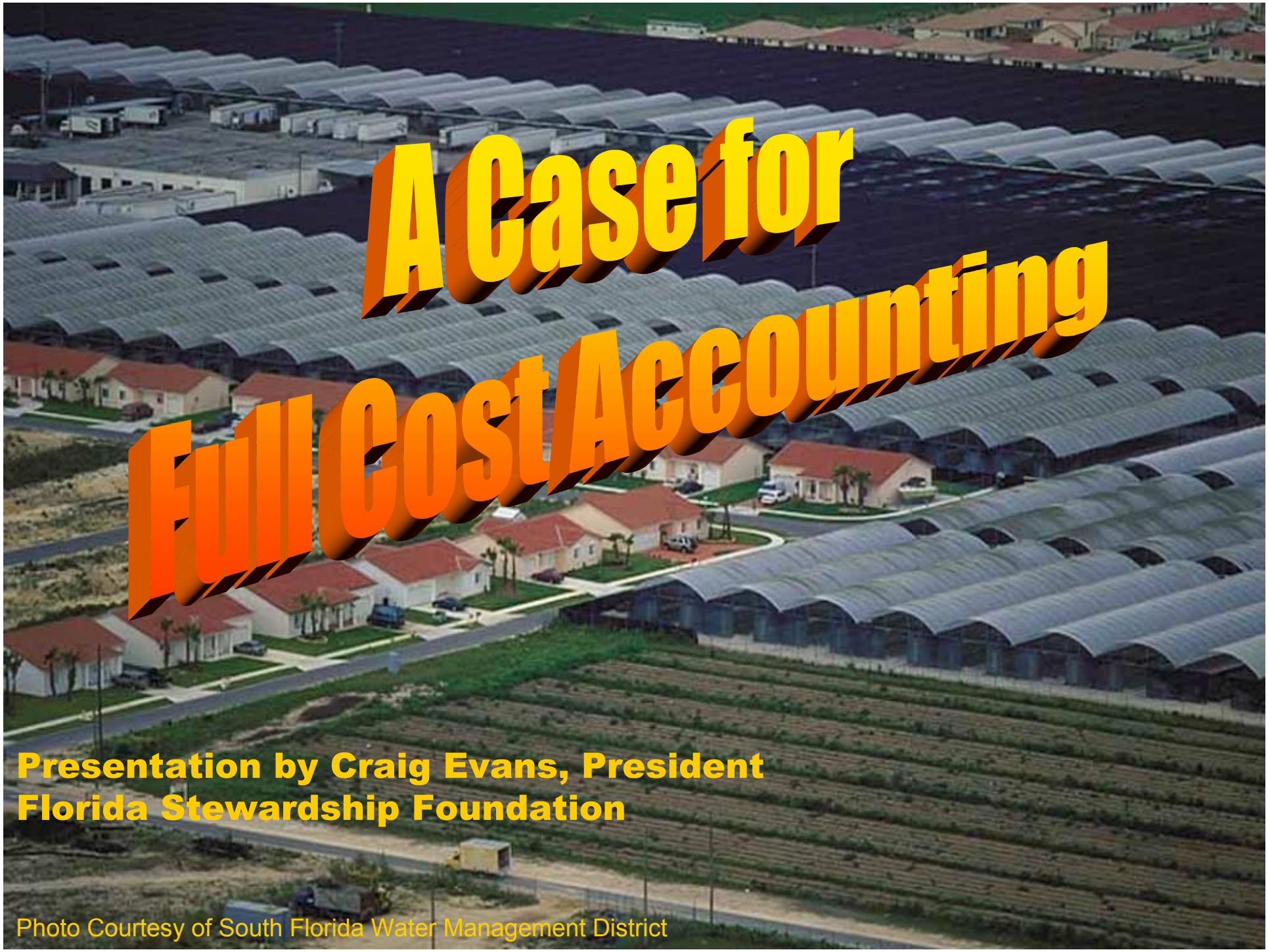

A Case for
Full Cost Accounting
Presentation by Craig Evans, President
Florida Stewardship Foundation
Photo Courtesy of South Florida Water Management District

Most economists will admit it ... although somewhat reluctantly

You can build an economic study to prove almost anything.

It all depends upon which numbers you select.

The best way to ensure an impartial, valid study is to consider ALL numbers -- and to consider short-term and long-term factors that affect these numbers.

Photo from
Florida Stewardship Foundation

That final point is the premise upon which Florida Stewardship Foundation built its studies on the economics of land use in Florida counties -- that, and a thorough peer review.

Florida Stewardship Foundation has conducted 4 countywide studies & one subcounty study in Florida.

These studies analyzed:

- the economic contributions of agriculture
- the revenues generated and expenses incurred by different types of land use -- residential, commercial, industrial, agricultural, vacant and open
- the opportunity costs of converting land from one use to another (i.e., how much value is gained or foregone over time when land use A replaces land use B, C or D?)

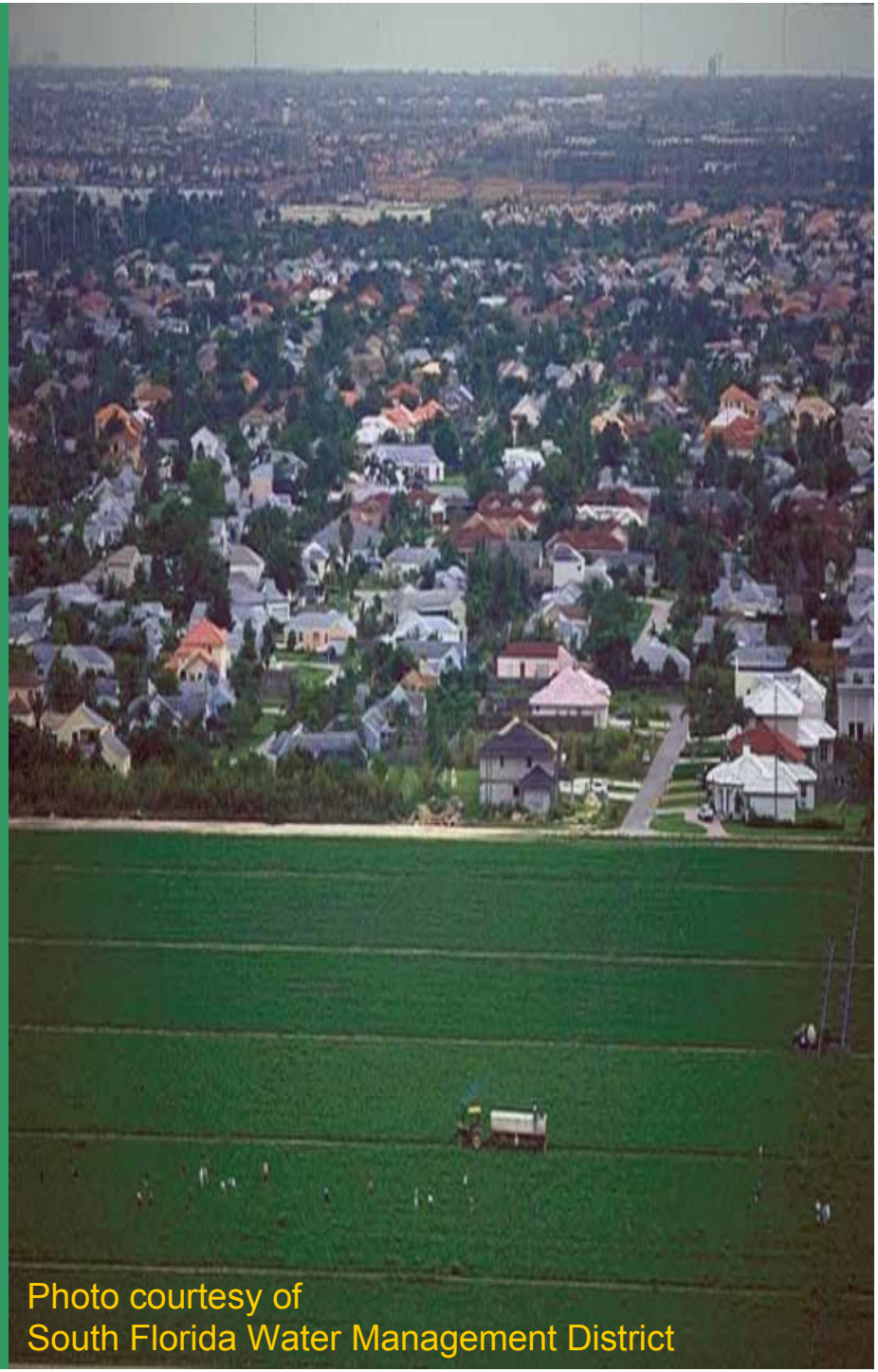
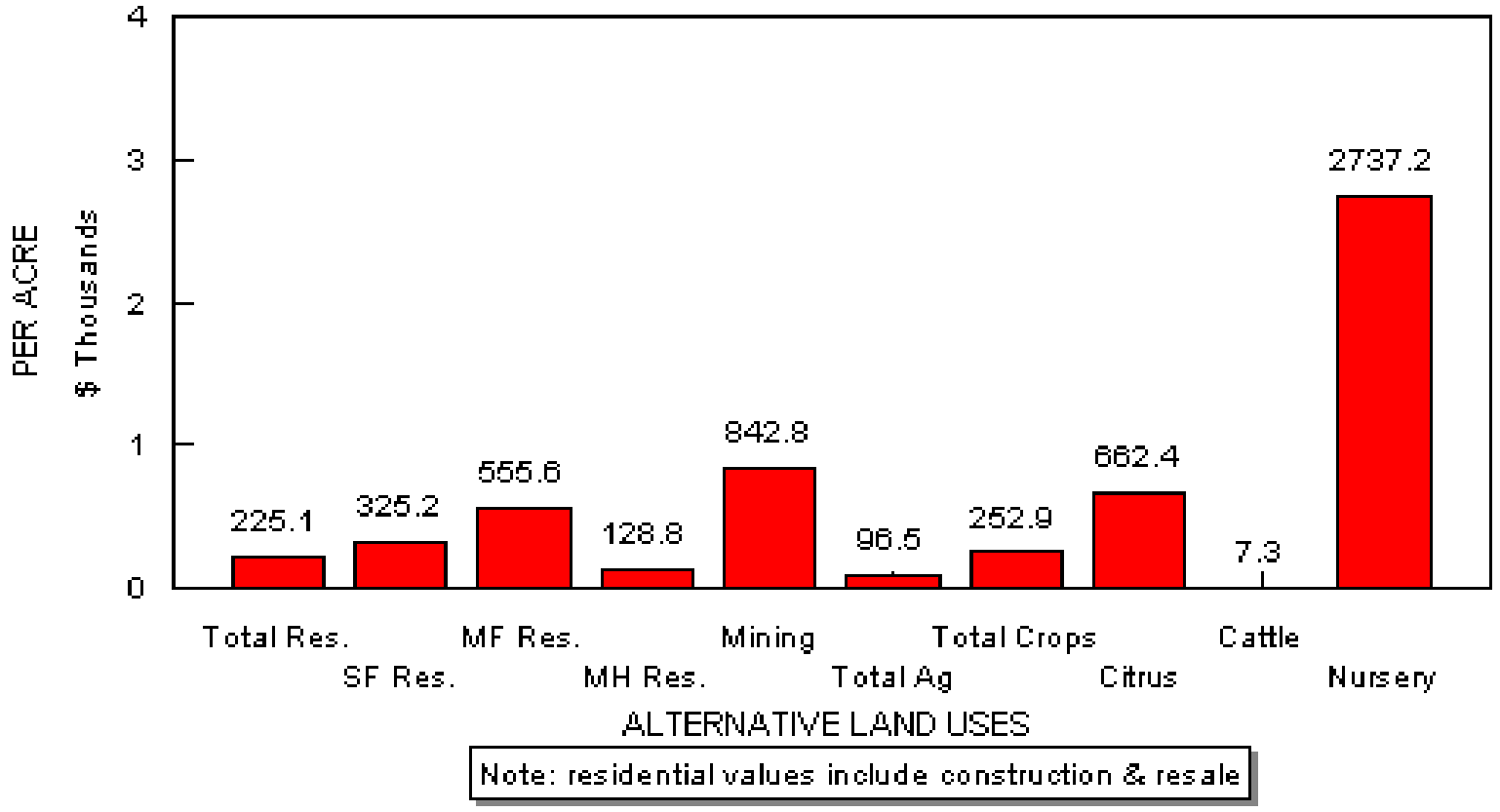


Photo courtesy of
South Florida Water Management District

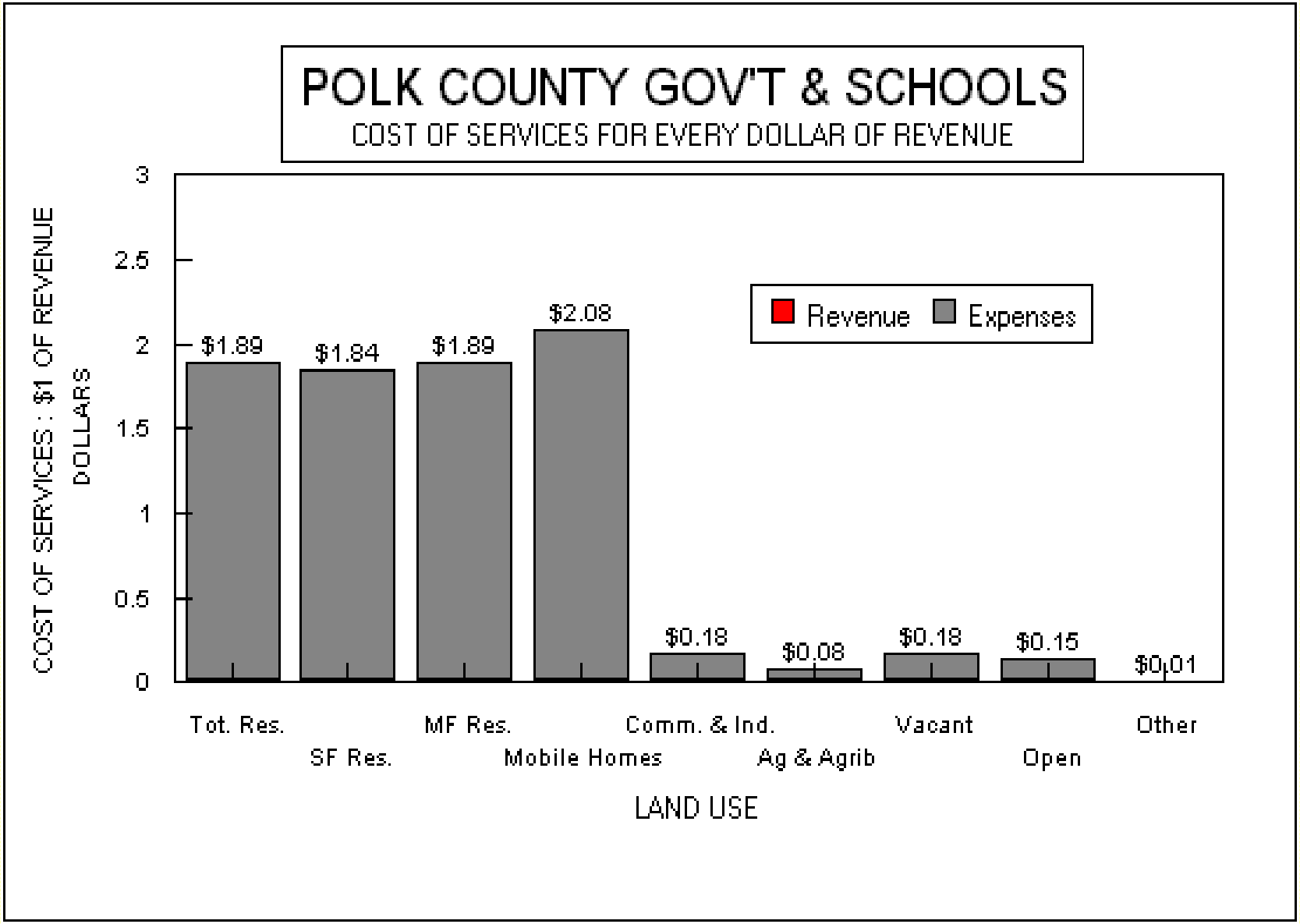
Here’s a sample of the results ...

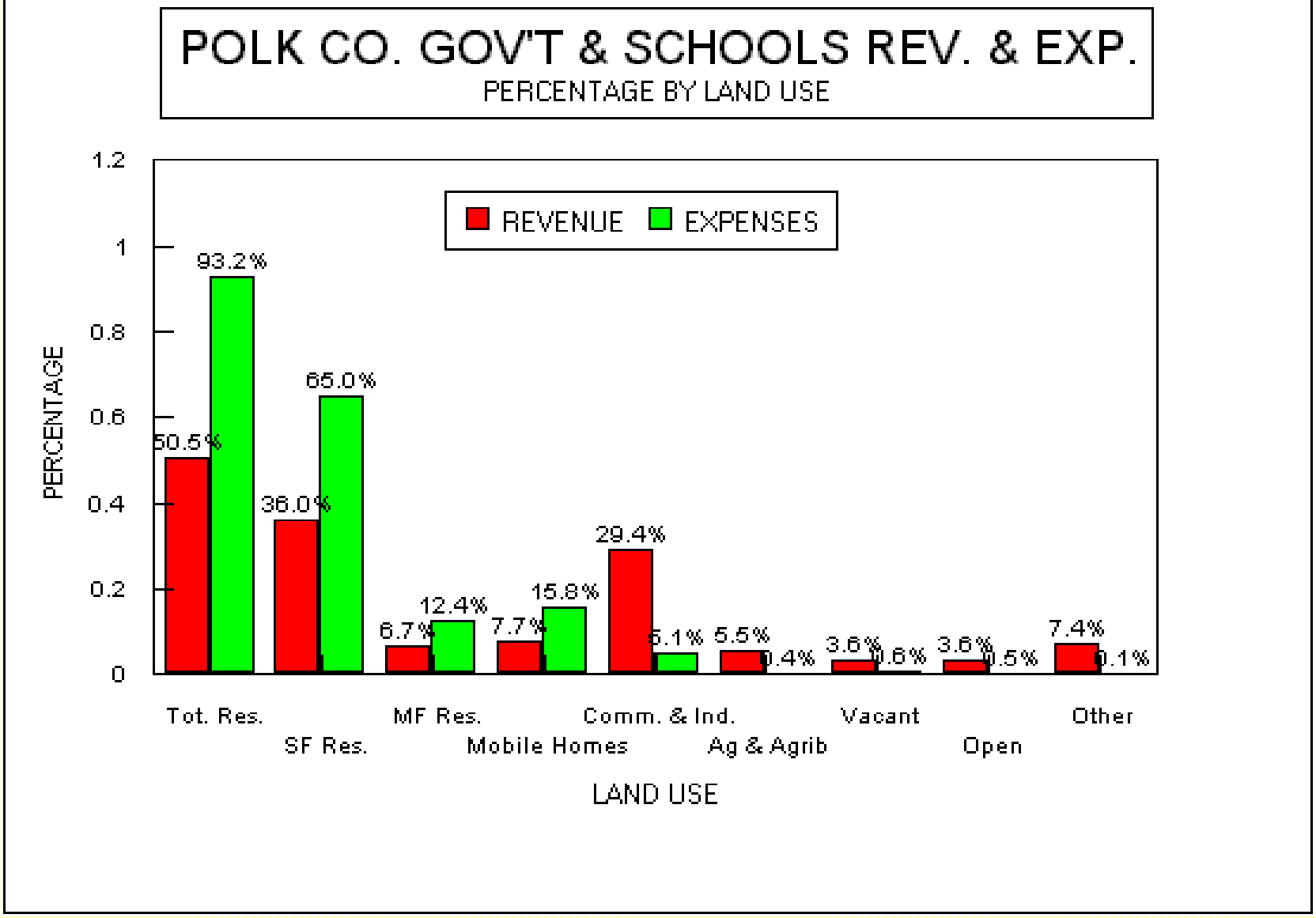
OPPORTUNITY COST

Impact to Polk County Economy Over 50 Years



Note: residential values include construction & resale


POLK COUNTY GOV'T & SCHOOLS
COST OF SERVICES FOR EVERY DOLLAR OF REVENUE
COST OF SERVICES : $1 OF REVENUE
DOLLARS
3
2.5
2
1.5
1
0.5
0
$1.89
$1.84
$1.89
$2.08
$0.18
$0.08
$0.18
$0.15
$0.01
Revenue
Expenses
Tot. Res.
SF Res.
MF Res.
Mobile Homes
Comm. & Ind.
Ag & Agrib
Vacant
Open
Other
LAND USE


POLK CO. GOV'T & SCHOOLS REV. & EXP.
PERCENTAGE BY LAND USE
REVENUE
EXPENSES
PERCENTAGE
1.2
1
0.8
0.6
0.4
0.2
0
50.5%
93.2%
36.0%
65.0%
6.7%
12.4%
7.7%
15.8%
29.4%
5.1%
5.5%
0.4%
3.6%
0.6%
3.6%
0.5%
7.4%
0.1%
Tot. Res.
SF Res.
MF Res.
Mobile Homes
Comm. & Ind.
Ag & Agrib
Vacant
Open
Other
LAND USE

Florida Stewardship Foundation also has conducted studies in …

- **Hillsborough County**
- **Collier County**
- **Lake County**
  and the Agricultural Reserve Area in
- **Palm Beach County**

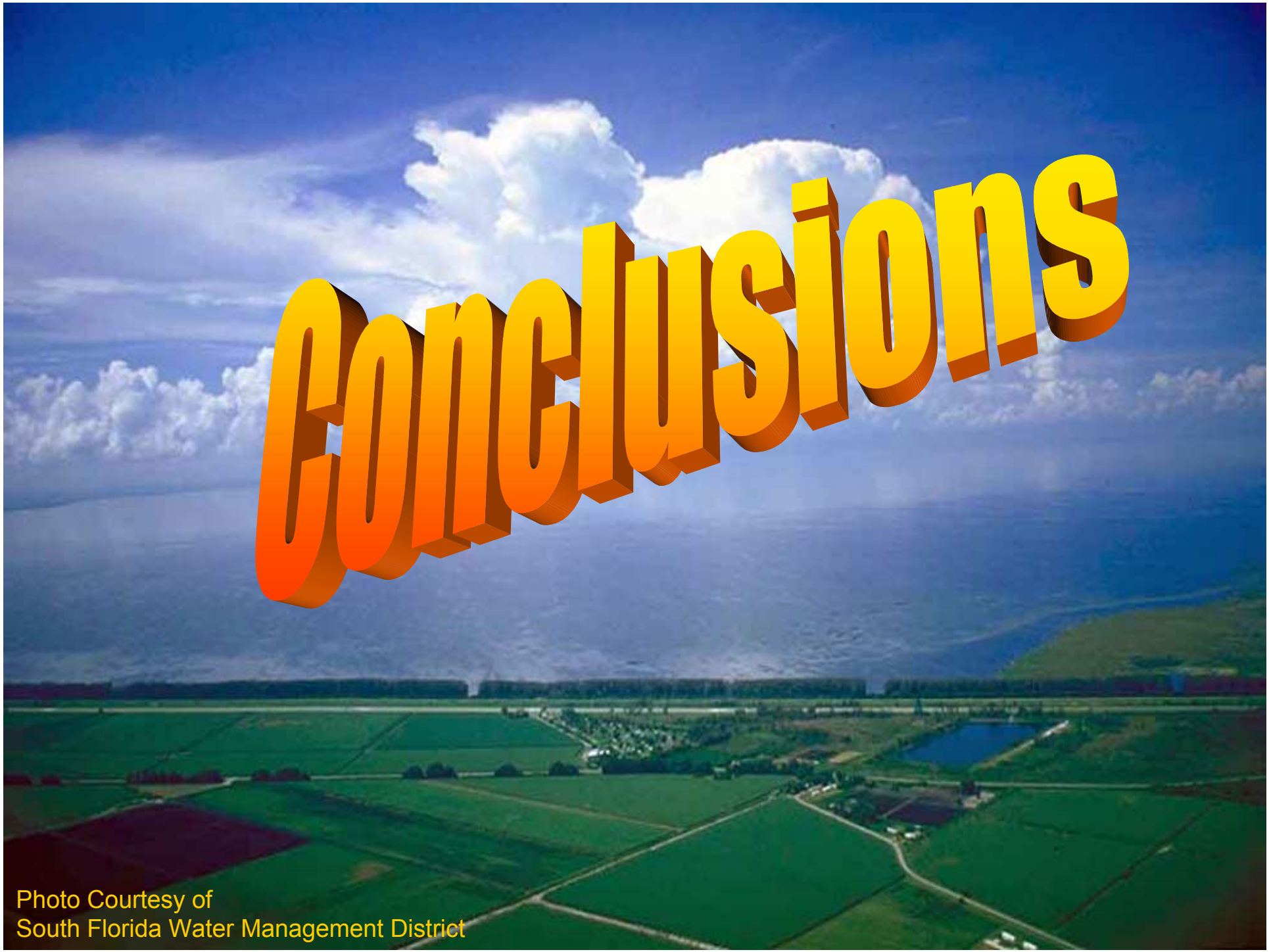
Other organizations throughout the country have conducted similar studies …often using different methodologies.

Yet the results of these studies are very similar … numbers vary from study to study … and county to county … **but the relationship between different land uses remains the same.**

For example:

A study was conducted in Sarasota County in 1999 by Tischler & Associates, Inc. using Regional Economic Models, Inc, (REMI) software. The study broke land uses down into 19 categories. It found:

- **residential land uses as a whole create a deficit. However:**
  - **homes priced at $350,000 and above create a surplus**
  - **median priced homes occupied by seniors also create a surplus**
- **agricultural land uses create a surplus -- 80 cents out of every dollar of revenue received**
- **commercial and industrial land uses create a surplus -- although some commercial enterprises, such as construction, create much less of a surplus that than other types of commercial uses, such as professional offices.**


Conclusions
Photo Courtesy of
South Florida Water Management District

Defining the price at what a home begins to create a surplus is different for every county. It depends upon several variables:

- property valuation method
- impact fees
- percentage of homes occupied by adults without school age children
- percentage of homes priced above the break-even point

However, there currently is no mechanism in any Florida community for determining the fiscal impact of each housing type, nor for adjusting the mix as developments are approved so there is a better fiscal balance between all housing types and all types of land use in each community.

Many county records are not kept in a manner that delineate revenues and expenses by land use.

For this reason, it is not readily apparent that residential uses (or which type of residential units) create a deficit; or that agricultural, commercial/ industrial, and open land uses create a surplus.

Consequently, county decision makers only see one side of the coin: the extra revenue brought in -- in the short term -- by residential development.

The other side of the coin, the costs of services required by residential development -- and its ongoing deficits -- are not easily visible.

There are several reasons for this:

- Residential land uses appear to be fiscally attractive because they provide short term stimulus to the economy during construction and contribute a significant amount of revenue to the tax base.

- The full impact of costs associated with the services needed by a residential development, such as fire and police protection, schools and roads, may not become apparent for several years ... after the impact fees paid for specific housing units have been exhausted ... and after all the housing units are occupied and their residents begin using their full share of public services and infrastructure.

- Because of the continuing nature of growth, the addition of new taxables, the expansion of the tax base and collection of impact fees help obscure the deficits that are incurred as yesterday's developments begin demanding their full share of public services.

- **Finally, infrastructure improvements are made in stages: a sewage treatment plant or incinerator, for example, is built with excess capacity to allow for future growth.**

  Shortfalls in capacity or miscalculations in the actual costs of providing service to a resident do not become apparent until the excess capacity is used up and a new plant or expansion becomes necessary ...
  at a cost of several hundred million dollars.

In addition, there are costs related to commercial and industrial development, mining and agriculture that go beyond initial community expenditures. These include water availability and environmental impacts.

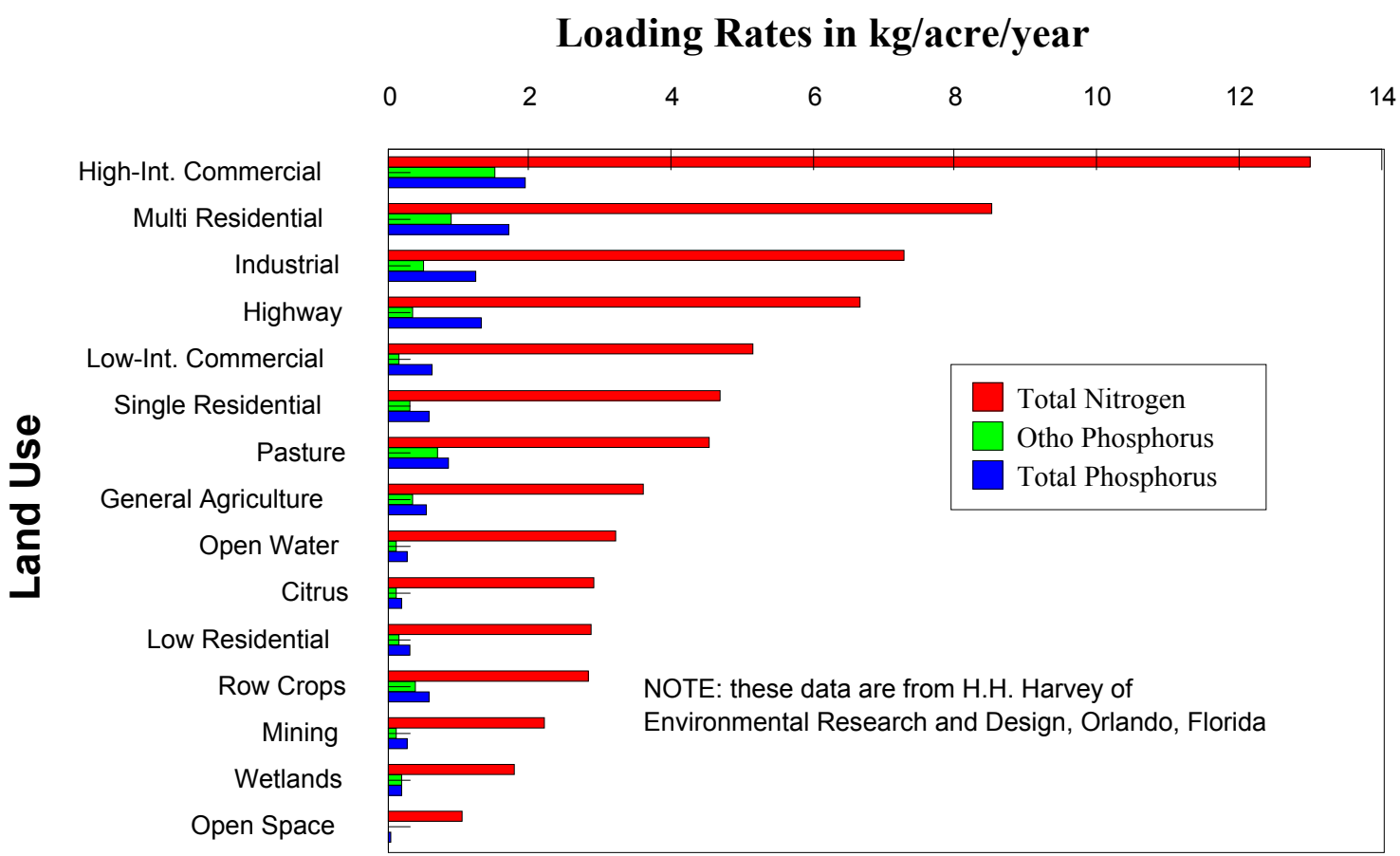
These costs also need to be considered when planning decisions are made.

It should be noted, however, that an extensive review of more than 200 water quality tests throughout the state of Florida indicates that, on a per acre basis, urban land uses contribute more pollution to the environment than most agricultural uses.

Careless disposal of household chemicals, overzealous fertilizing of home lawns and gardens, gas and oil spills from cars and trucks, and heavy metal deposits from the wear on engines and brakes all take their toll.

These are costs that currently are not counted in any economic analysis.

Nutrient Runoff from Various Land Use Categories in Florida



Also: Much of the liability generated by our current mix of land uses is in the form of "unfunded mandates" since many costs – such as adequate classroom capacity in public schools – are being deferred.

These "unfunded mandates" were not captured in the numbers reported in Florida Stewardship Foundation's studies, since the studies used **actual** expense and revenue numbers from county and school budgets.

It is obvious, however, that some areas of the state -- and some service sectors, such as schools -- are receiving less than the optimal amount of funds needed to provide adequate levels of service for current residents.

Hence, the state is already facing the need to "catch up," even before new residents are added.

When service levels are increased to meet public demand, and the bill comes due for increasing service levels up to the capacities required, many counties may face the uncomfortable necessity of raising taxes or compromising or cutting services -- or, worse, having to do all three (leaving residents with congested roads, crowded schools and poorly maintained public facilities ... and even higher taxes).

These choices -- and dilemmas -- already are becoming apparent in many fast-growth communities in the state.

However, these communities still have the opportunity to overcome these pitfalls.

Recommendations

Photo Courtesy of
South Florida Water Management District

The data gathered from the studies conducted by Florida Stewardship Foundation indicate that land use planning in Florida lacks an effective cost-accounting component.

These studies also suggest that, with a few minor policy changes -- such as the way in which information is gathered and reported -- it may be possible to better understand the impacts and consequences of all future land use options: so deficits created by a change in one land use can be identified and balanced by surpluses generated through an accompanying adjustment in another land use.

For example, if a community decides to build 100 affordable housing units, it is possible to calculate fairly accurately how much of a deficit would be created by this land use for county and school budgets over time. It also would be possible to calculate which other land uses can be encouraged at the same time to completely offset this deficit.

This would make it much easier to obtain a fiscally balanced mix of land uses -- a mix that would be economically sustainable for the long term.

As a result, decisions would be less likely to be driven primarily by revenue issues, such as increasing the tax base, without a corresponding look at the cost of services involved, or by market pressures to convert lands that presently create a surplus into developments that may appear attractive in the short term, but which can create large deficits over the long term.

Rather, a continuing fiscal balance could be achieved through a sound understanding of the economic ramifications of different land use options.

The way in which this can be done is to develop and implement a full cost-accounting system to inform and guide decisions.

This involves calculating the economic impacts of programs and facilities, not simply in terms of immediate outlays, but in terms of TOTAL costs and benefits.

These calculations would show the costs and benefits that are generated over time as a result of each public action, including the additional costs of public obligations that are created by the initial expenditure.

Full-cost accounting system could be developed and implemented in Florida through a ten-step process:

1. Determine what data needs to be gathered.

2. Assist communities in gathering data.

3. Provide software to generate Activity-Based Cost (ABC)accounting reports in addition to existing financial reports. Include a program that will calculate estimates of "opportunity cost," or value over time to the economy that is gained or foregone when an acre of land is converted from one use to another.

This “first step” would allow communities and counties to make decisions with a more complete financial picture, would build on existing budgeting and reporting systems, without supplanting or replacing them, and would “open the door” to the introduction of more complete accounting systems by showing the benefit of this type of analysis.

Next:

4. Identify critical social and environmental factors – historic sites, habitats for listed species, economically depressed neighborhoods, etc.

5. Determine what data needs to be gathered to provide GIS map overlays showing all existing land uses, infrastructure, and key features of the critical social and environmental factors. Be sure to include food and fiber production – from agriculture and forestry – as an essential part of the state's infrastructure

6. Assist communities and counties in gathering this data and generating the appropriate GIS maps.

Next:

7. Retain a team of *ecological* and *social economists* to conduct Contingent Value (or CV) analyses to determine the values of specific social and environmental factors.

CV analyses measure how much people are willing to pay for natural resources. They provide a statistically valid sample of the public for the purpose of comparing these values with the values of traditional market activities (such as building houses or expanding a manufacturing plant).

8. Provide software for communities and counties to add this data to their activity-based cost accounting systems and tie each data set in the accounting system to a specific GIS map.

Next:

9. Choose a standard "visioning" software for statewide use – such as the GIS-based INDEX community indicators software produced by Criterion Planners/Engineers of Portland Oregon, or the "Sim City" software developed by the Environmental Simulation Center that combines 3D modeling with GIS, so communities can experiment with urban designs and see quantified environmental and fiscal impacts.

10. Provide communities and counties with the economic research and analysis, data gathering tools, software, instructions and technical support that is necessary to tie these steps together in order to implement full-cost accounting.

A “full cost accounting” system would give planners and policy makers a means of taking all costs and benefits into consideration. Such a system also could be designed to account for costs and benefits of specific social and environmental issues.

Then we would be able to have holistic planning ... and a reliable guide for creating communities that are truly sustainable ... economically ... socially … and environmentally

Photo by
David Maehr


Discussion
Photo Courtesy of
South Florida Water Management District

For further information, please contact:

Florida Stewardship Foundation
621 N.W. 53rd Street, Suite 240
Boca Raton, Florida 33487
Telephone: 561-995-1474
Email: info@fl-stewardship.com