

A Decision Makers Forum

Lake Okeechobee: Headwaters of the Everglades

Some 200 decision makers gathered recently to focus on how to improve conditions in Lake Okeechobee and maintain its fishery and to explore the economic impact of the lake and the future the region's rural communities. The Jan. 17, 2008, forum "Lake Okeechobee: Headwaters of the Everglades" was held at the Dolly Hand Cultural Arts Center on the Belle Glade campus of Palm Beach Community College.

Drs. Tom Lodge and Susan Gray opened the program describing the lake's historic role linking the Kissimmee River to the Everglades, the hydrologic, biological and geological changes wrought by construction of the Herbert Hoover Dike and the decline of water quality. Much of the discussion that followed centered on preserving, restoring and managing Lake Okeechobee.

The 11-member discussion panel was comprised of: Okeechobee County Commissioner Clif Betts Jr.; Charles Bronson, Florida Commissioner of Agriculture and Consumer Services; Dr. Paul Gray, Okeechobee Science Coordinator for Audubon of Florida; Col. Paul Grosskruger, Jacksonville District Engineer for the U.S. Army Corps of Engineers; Executive Director Kenneth D. Haddad, of the Florida Fish and Wildlife Conservation Commission; Mary Ann Martin, owner of Roland Martin's Marina in Clewiston; Terrence "Rock" Salt, Director of Everglades Restoration Initiatives of the U.S. Department of Interior; Secretary Michael W. Sole of the Florida Department of Environmental Protection; Malcolm S. "Bubba" Wade Jr., Vice President of Sugar Operations of U.S. Sugar Corp. and a member of the Governing Board of the South Florida Water Management District; Executive Director Carol Wehle of the South Florida Water Management District; and Frank "Wes" Williamson III, of Williamson Cattle Company in Okeechobee.

The first half of the dialog centered on conditions in the lake and its multiple roles, while the second half concentrated on adapting to uncertainties and economic development. Audience members provided a steady flow of written questions, which Facilitator Janice Fleischer posed to the panel. The questions demonstrated that those attending were knowledgeable not only about the lake itself but also the management strategies employed over the years, their impacts and the current economic and political issues.



LIVING ON THE EDGE: A DIALOG ON MANAGING LAKE OKEECHOBEE

The dialog began by acknowledging Lake Okeechobee's multiple roles and evaluating the challenges of achieving conflicting goals of restoration and water-supply demands. The main topics were:

- Current conditions in the lake
- Balancing people's demands for water and the needs of Nature
- Water quality
- The impact, management and removal of accumulated sediments in the lake and littoral zone
- The economic, navigational and environmental impact of regulatory efforts to manage the level of the lake.
- Water flows (discharges) to the Everglades and estuaries.

Value of Lake Okeechobee

Panelists were first asked to assess **the value of the lake socially, economically and as a natural resource and to express an opinion as to whether managing the lake for multiple purposes is an achievable goal.**

Florida's Department of Environmental Protection Secretary Mike Sole described the lake as "priceless" and added that "with its multiple roles and responsibilities, a multi-purpose solution is required." However, the general consensus of the panel was that the lake isn't functioning well and is meeting neither the needs of Nature nor the demands of people.

Current Conditions

Asked **what symptoms of the lake's decline are most important to treat**, the panelists identified the quantity and quality of water flowing into the lake. Lake Okeechobee "has gone from looking like an aquarium to [being] one of the most polluted lakes in the country," marina owner Mary Ann Martin, of Clewiston, said.

Carol Wehle, Executive Director of the South Florida Water Management District, emphasized the need to deal effectively with the problem of excess nutrients (mainly phosphorus) in the lake's muck-laden bed, "Even if we stopped putting nutrients in today, every time we get a hurricane, the muck that is already there is stirred up again." The current drought has created an opportunity to remove muck by mechanical means, which is being done in parts of the littoral zone along the northwest shore.

North of Lake Okeechobee, phosphorus inputs from existing urban and new communities in the Kissimmee Valley north of the lake still need to be addressed. The ongoing restoration of the Kissimmee River is slowing the flow of the river and re-establishing marshes in large portions of the flood plain where phosphorus-laden sediments are released, or settle out. The net result is that less phosphorus reaches the lake. Best Management Practices, implemented on the agricultural lands in the Kissimmee Valley and along tributaries, are also reducing the amount of phosphorus that would otherwise flow

into the lake. Nonetheless, the total volume and concentration of phosphorus flowing into Lake Okeechobee remains worrisomely high and far exceeds the goals that have been set.

Even if the South Florida Water Management District implements its Northern Everglades Plan, it may require decades to reduce the impact of this legacy phosphorus on Lake Okeechobee.

Balancing Lake Management

The audience asked **whether people's demands for water will outweigh or overcome the desire for a healthy ecosystem, which needs large amounts of clean water.** “We can design the system to meet both needs,” Paul Gray, Okeechobee Science Coordinator for Audubon of Florida said. Dr. Gray strongly advocated additional water storage north of the lake and predicted the lake's littoral (shoreline) marsh will recover if water levels near the base of the dike are kept reasonably shallow. It will take longer to deal with the muck in the middle of the lake, he added.

Panelists agreed that the Legislature's support of the Northern Everglades Plan, which calls for more water storage north of Lake Okeechobee, and the South Florida Water Management District's drought-spurred re-allocation of funds to pay for removing muck along the exposed shore of the lake were positive indications that state agencies consider the health of the lake a priority.



The Legislature has also mandated that the District assist lake and coastal communities in identifying and developing alternative sources of water to reduce their dependence on water from Lake Okeechobee. The District's efforts have focused on shifting utilities to groundwater from surface-water sources, encouraging use of recycled water and developing a district-wide water-conservation ethic.

With assistance from the state and the District, Palm Beach County has provided most of the financing and built a regional water-treatment plant to assist South Bay, Belle Glade and Pahokee shift to wells. Groundwater is now cheaper to treat and a more sustainable source of drinking water than Lake Okeechobee. For the same reason, Clewiston too has shifted to groundwater leaving only the Okeechobee Utilities Authority still using Lake Okeechobee as a primary source of drinking water.

“The District has taken the lead to ensure we are not going to outstrip the demand for the water in the lake,” Malcolm “Bubba” Wade, a member of the Governing Board of the South Florida Water Management District, said.

Sediments

The audience raised more questions about lake sediments, including: **What steps are being taken to remove or reduce sediment within the lake? Why isn't removing sediment from the bottom of the lake [considered and counted] as a means for reducing phosphorus?**

Wehle listed lessons learned from joint studies and actions by the South Florida Water Management District in cooperation with other agencies:

- The Kissimmee River restoration, having slowed the velocity of the river and put water back into a large reach of the river's meandering oxbows, has reduced sediment-input to the lake
- A pilot project proved that removing deep-water sediments is impracticably expensive. Mechanically removing sediments from the littoral marsh during drought when the lake drops is cost effective, but disposing of the removed sediments remains a problem because of contaminants and the costs of transport.
- Wildfires burning through the exposed muck have removed phosphorus.
- Agencies are now cooperatively experimenting to determine if disking exposed muck will successfully sequester the sediment under a layer of the sand in the lake bed

Agriculture has also been proactive in utilizing fiscal incentives to implement Best Management Practices and is incorporating new science and technologies into those practices. Dairy and cattle producers have reduced nutrient loads of pasture and field runoff, which flows into the Kissimmee River by constructing ponds and water-storage areas to filter, or settle out, nutrients.

Frank “Wes” Williamson III, an Okeechobee County cattle rancher and citrus grower, is one of eight area ranchers participating in a study to determine whether paying landowners for such "environmental services" as storing and treating water to remove excess nutrients is a viable, cost-effective alternative to using taxpayer's dollars to buy land, construct and operate treatment facilities for farm and urban runoff. The pilot project's approach "can be an essential part of the solution to [the problem of] water storage that will help water quality as well," says Williamson.



CES Photo

Water Releases from Lake Okeechobee

Opening presentations had pointed out that Lake Okeechobee is much smaller today than historically when the lake reached 21 feet NGVD and water spread for miles across the natural marshes of the flood plain. Today the Herbert Hoover Dike, with its base at 15 feet, sharply confines the lake. Releases of water through canals and into coastal estuaries are triggered as the confined lake begins rising toward a level that threatens the integrity of the dike. Public safety was the No. 1 consideration for the Corps of Engineers when (subsequent to the forum) it established a regulatory schedule that would have the lake fluctuate between 13 ½ and 15 ½ feet.

Depending on how much rain falls on the lake and its watershed, the release of water can be large and sudden. Typically the estuaries of the St. Lucie and Caloosahatchee rivers bear the brunt of releases, which can uproot sea grasses and kill much of the marine life in estuaries. Increasing the capacity to store water north of Lake Okeechobee by as much as 1.3-million acre-feet, as proposed in the Northern Everglades Plan, would reduce the perceived need to discharge water from the lake into the estuaries.

Lake Regulation Schedules

Quizzed on whether **agriculture can adjust and remain a sustainable enterprise if the lake is held below 15 ½ feet, meaning less water is available for irrigation**, there was general agreement that, in the long-term, more water storage north of the lake would be required. Only additional storage -- estimated at 900,000 to 1.3 million acre-feet -- provides the flexibility to moderate, or offset, the extremes of seasonal rainfall while meeting agriculture's irrigation needs and the needs of Nature. The current low level of the lake is primarily a result of drought, but independent engineers have warned that to prevent a failure of the Herbert Hoover Dike, the level of Lake Okeechobee must remain below 15 ½ feet. "If we had the storage capacity in the northern regions, we could better regulate the lake levels. We have to build more storage into the system," Paul Gray summarized.

Terrence "Rock" Salt, Director of Everglades Restoration Initiatives for the U.S. Department of Interior, observed that everyone should share the burden of maintaining a lower lake level. Options for releasing water from the lake as it rises to hazardous levels are limited. "Part of the solution has to be to figure out how to get the southern releases underway so that we have that option as one of our tools," Salt added.

Principles for Lake Okeechobee Decisions

- Maintain the lake's viability when accommodating multiple users
- Integrate both lake and watershed when making decisions
- Provide flexibility for timely reactions to current problems
- Promote entrepreneurial approaches to problem solving
- Recognize that ecosystems require time to recover from damages or respond to changes
- Build trust with open, inclusive communications and decision-making
- Avoid pitting one lake user or beneficiary against another

A regulatory schedule adopted to manage Lake Okeechobee usually includes a complex "decision tree" to guide managers about when to hold and release water from the lake. Audience members posed several questions probing whether **"deviations" from a regulatory schedule are easier and faster to obtain for water supply/irrigation purposes than are deviations to repair environmental damage**. Auxiliary questions were raised as to **how to build trust among and between stakeholders and public officials to resolve water-management problems**.

"We cannot run Mother Nature with a bunch of flow charts," observed Colonel Paul Grosskruger of the U.S. Army Corps of Engineers. One basic problem, he added, "We have six times more water [coming into the system] than we can manage."

South Florida's water-management system is designed to drain, a constraint that virtually impels the release of water because there is scant storage capacity anywhere but Lake Okeechobee. State and tribal water-quality standards, a court injunction prohibiting the release of water into the Everglades that does not meet water-quality standards, subsidence in the Everglades Agricultural Area between the lake and the Water Conservation Areas and laws protecting endangered species also impact the decision process.

Communication and Transparency

Several panelists mentioned the importance of communication, incorporating feedback from the public, transparent decision-making and remaining accessible to interested parties and local communities. There was general agreement that agencies are getting better at

communicating with each other and with nongovernmental organizations. Several panelists stated that they consider it important also to take information to local communities and to solicit and get local input before final decisions, and they said their agencies are increasing efforts to do both.

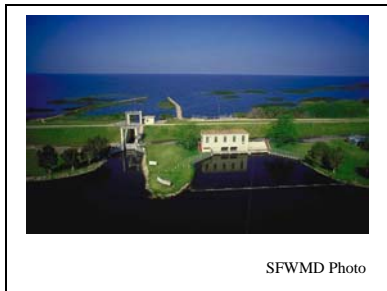
Water Flows to the Everglades

Panelists were asked specifically by the audience to comment on proposals to **reduce or eliminate damaging Lake Okeechobee discharges to the estuaries by establishing a flow way to discharge more water south into the Everglades.**

The panel was in general agreement that moving more water south is a concept in keeping with Everglades restoration and its ideal of "getting the water right." However, the panel also acknowledged some of the problems.

At present there is no clear idea of what kind of flow way should or could be created. Some people define it as larger canals, others describe it as a wide and naturally flowing sheet of water between two major canals or refer to it as a spillway to relieve pressure on the dike, and still others talk about some combination. Most seem to agree that pumps would have to be used to move water south through, or across, what is now the Everglades Agricultural Area.

The Herbert Hoover Dike and subsidence in the Everglades Agricultural Area, which is now at a lower level than the lake or the Water Conservation Areas, impede re-creating the historic sheet-flow of water south out of the lake. Other challenges include the presence of historic communities; a state highway; other public and private infrastructure, including a state prison, sugar mill and refinery; the poor quality of water in Lake Okeechobee, which would have to be filtered or treated to remove phosphorus before it could be released into the Everglades; and cost.



The South Florida Water Management District Governing Board and its Water Resource Advisory Committee have concluded that a flow way is a concept that should continue to be discussed. The further development of the Northern Everglades and Lake Okeechobee Restoration Plan is expected to provide a clearer picture of how more water can be released south.

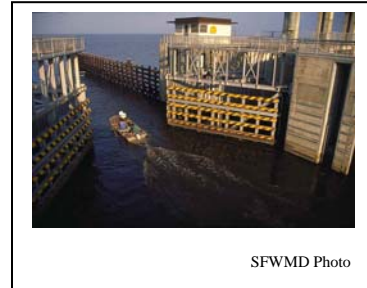
The Legislature has required the District to develop a plan to improve conditions in the estuaries by January 2009. Panelists emphasized that care must be taken to ensure that the state's diverse restoration elements work in tandem with the Comprehensive Everglades Restoration Plan and the Lake Okeechobee and Kissimmee River restoration efforts. The complexity of achieving and coordinating the goals of plans, suggest that more time than many would like to take will be needed.

Navigation in the Lake

Many audience members sought to draw panelists out on **navigation and boating issues, including how to address the problems that will arise by lower lake levels.** Some 35,000 boats annually cross the lake, a number that could decline dramatically if the

navigation channel and access channels are not kept open and maintained at navigable depths. A decrease in the number of boats and yachts would mean sharp declines in income for marinas and other area businesses dependent on boating and fishing.

Maintaining historic channels connecting shoreline marinas and communities with the open water of Lake Okeechobee has become a problem. Many of the channels were dredged and opened long before a permitting process was established. Grosskruger acknowledged the seriousness of navigation issues. With the tightening of the federal Operations and Management budget, the Corps has sought the assistance of the Florida Inland Navigation District. The state Legislature expanded that district's jurisdiction to include access channels in Palm Beach County. Legislation may also be needed to establish jurisdiction to work in other counties around the lake.



Wade assured the audience that the South Florida Water Management District will work with the Florida Department of Environmental Protection and communities in Hendry, Glades and Okeechobee counties to develop a permitting process to maintain commonly used access channels.

LIVING ON THE EDGE: ADAPTING TO UNCERTAINTIES TO SUSTAIN THE LAKE AND PEOPLE

The second session of the dialog continued to address the constraints of the existing water-management system, while highlighting ways of adapting to uncertainties. It spurred a variety of questions. The main topics included:

- The current status of the Herbert Hoover dike and the safety of the adjacent communities
- Uses for the muck being removed from Lake Okeechobee
- Preservation of agriculture in the region
- Economic development that preserves the rural character of the region
- Development and promotion of regional tourism
- Maintaining and improving a healthy fishery in Lake Okeechobee

Safety of the Herbert Hoover Dike

Several people in the audience asked: **"Will the Hoover dike hold in the face of a major hurricane? Are there plans to evacuate communities around the lake?"**

Rehabilitation of the Herbert Hoover Dike is top national concern for the Corps of Engineers and the safety of the dike is its No. 1 priority, Grosskruger said. Wehle concurred and added that officials of the Corps, the District and the state's Emergency Operations Center have met with local officials and that every community around the lake now has an evacuation plan.

Beneficial Uses of Muck

What to do with muck that has been removed from Lake Okeechobee brought a number of suggestions including spreading it on sugar-cane fields, moving it to phosphate recovery areas and converting it into fuel. Marianne Martin's proposal to create spoil islands in the lake, surrounding them with rock riprap to hold the muck in place as it dries out, generated considerable interest. The islands would also serve as new habitat for birds and fish. (Everglades Adventures, a partner in the redevelopment of Pahokee's marina and campground, similarly proposes islands as a breakwater.) Ken Haddad, Executive Director of the Florida Fish and Wildlife Conservation Commission, however, cautioned that previous efforts to create spoil islands of muck have failed in other Florida lakes.

The cost of transporting muck from dredge sites to farm fields or otherwise disposing of it presents a serious impediment. Muck could be processed into fuel, but whether the processing would consume more energy than the resulting fuel would yield, could not be determined during the discussion.

Rural Economic Development

Agriculture has long been a stable economic engine for people in the Lake Okeechobee region. **As globalization and free trade agreements change the economic dynamics of agriculture, the search is on to find ways to diversify with new crops and to add new streams of revenue in order to maintain agriculture as a profitable enterprise. What are the prospects of new crops? Rock mining? Payment for environmental services?**

In addition to developing export markets, the Florida Department of Agriculture and Consumer Services is promoting a Farm to Fuel program and encouraging farmers to look at new crops and new uses for crops they now grow. For some years sugar mills have burned bagasse and yard trash in co-generation plants to operate mills, selling excess electricity to utilities. Research has begun to determine whether cellulosic wastes can be turned into a bio-diesel fuel. During the discussion the feasibility of harvesting blue-green algae from the lake was raised as another potential fuel. At the same time panelists warned against embracing new technologies and processes that consume more energy than they produce.

Paying Land Owners for Environmental Services

Compensates farmers for environmental services on their land and offsets lost revenue from removing land from production

Recognizes the public value of protecting wetlands, preventing water pollution, improving air quality, preventing soil erosion and providing wildlife habitat

Creates preservation incentive by providing additional income to farmers and ranchers

Reduces public cost of buying land for conservation, while protecting the tax base of rural counties and communities

Examples include the U.S. Fish and Wildlife Service's Conservation Banking Program, Florida's Rural and Family Lands Protection Act and the Florida Forestry Association's carbon sequestration initiative

“Using a variety of different programs can provide farmers with a diversified stream of income that can also achieve environmental goals,” emphasized Florida Commissioner of Agriculture Charles Bronson. If farmers can make money on their land, they won't feel the need to sell it for housing development.

Rural Land Stewardship Area Program

Established in 2001 by Section 163.3177 (11)(d), Florida Statutes

Provides an incentive-based planning process for conserving agricultural and environmentally sensitive lands

Emphasizes stewardship and rural sustainability

Allows rural landowners to transfer stewardship credits from lands having protection-worthy resources (sending areas) to lands more suitable for development (receiving areas)

Agricultural and natural resources on land designated as a sending area are protected from future development by permanent stewardship easements

<http://www.dca.state.fl.us/fdcp/dcp/ruralandstewardship/>

In recent years much of the discussion about preserving agricultural lands has centered on the state's Rural Lands Stewardship program, which allows agricultural landowners to sell and transfer development rights to accommodate housing and commerce. So far those benefiting from the program have been large landowners.

Two questions posed to the panel were: **Can the program also work for small farmers? Do rural counties and cities have access to the independent expertise needed to assess the impacts of new development and meet planning standards?**

Panelists appeared to agree that the Rural Lands Stewardship program, which involves negotiated tradeoffs of development rights for conserving land, has the potential to provide for growth while preserving agriculture and the rural character of an area. There

was also agreement that local control is important to ensure a region's unique characteristics are retained, the local economy is sustainable and the community supports the final decisions. The Department of Community Affairs is still working out the details of how the program will work.

Purchasing natural-resource lands for conservation is expensive. While there is recognition that Florida Forever and other land-acquisition programs are important and should continue, it is also generally acknowledged that it will be impossible for the state to purchase all the land needed. In addition, there is the expense of managing public lands and the impact on rural counties and cities of taking conservation lands off the tax roll. As Okeechobee County Commissioner Clif Betts Jr. stated, “We need to find a supplement for those losses in revenues so that those counties can continue to function.”

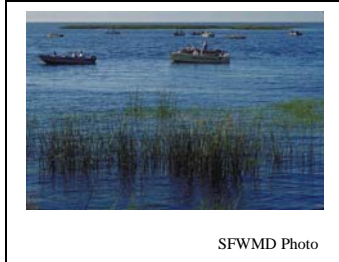
Federally funded rural-development initiatives pose a different problem for the Lake Okeechobee region. Federal programs are often tied to a county's population and economy. As a result it becomes difficult for some rural communities in Florida, such as Pahokee, Belle Glade and South Bay, to qualify. Though isolated and economically poor, these particular cities are in Palm Beach County, a rich and increasingly urban county. To get the necessary waivers can require months if not years of effort.

Ensuring a healthy fishery

Recreational fishing is recognized as an important part of the regional economy. Turbidity, low-water levels and the resulting loss of habitat have disrupted spawning, raising concerns about the viability of the fishery. Lake Okeechobee's present low water

level has also cut off access for many fishermen. All of that has had negative effects on tourism.

The **central questions posed by the audience were: If Lake Okeechobee has a healthy fishery, is it a healthy lake? Conversely, if the lake is healthy, will it have healthy fisheries? What must be done to revitalize the lake's sports fishery?**



A healthy fishery is one indicator of a healthy lake, although a healthy fishery can exist in a lake with higher-than-desirable nutrient loads. For the region's economy, several panelists agreed that a healthy fishery must become and remain a priority of lake managers if the region is to maintain, build up and protect its investment in the recreation and tourism industry.

Apart from fishing and boating, Ken Haddad, Executive Director of the Fish and Wildlife Conservation Commission, also noted an increase in the popularity of "wildlife viewing," a recreational activity that is also dependent on maintaining a healthy lake and surrounding environment. "This area begs for an economic engine based on agriculture *and* natural resources [and that] helps put everything we need to do in perspective," he added.

Audience members also raised several questions about the **use of herbicides to control exotic vegetation and their impact on the fishery**. While officials defended the practice as benign and necessary for the lake, they also conceded that contractors do not always comply with rules requiring that warnings be posted so that fishermen know when spraying is planned or ongoing. Accountability was diffused between the Water Management District and the Corps of Engineers, and until recently there was no way to report violations and problems. With a reporting system now in place, complaints seem to be abating. Biologists, however, continue to call for greater efforts to re-establish native aquatic plants.

FORGING ALLIANCES FOR A HEALTHY LAKE AND HEALTHY COMMUNITIES

While the forum focused on Lake Okeechobee, it quickly became obvious in planning the program that a "healthy Lake Okeechobee" requires the support of "healthy communities" -- that the two are tandem goals. Afternoon presentations and discussions focused on identifying and exploring local and regional initiatives that help build the local economy and that can serve as examples and resources of information and experience. Common elements of the presentations and responses to audience questions emphasized:

- The grass-roots nature of initiatives that gain local support and cooperation
- Perseverance
- Continuing collaboration with other organizations and local government
- Tenacious seeking of grants, utilizing Internet searches and maintaining a database that allows applications to be quickly customized.
- Promotions that enhance and reinforce the community's identity

- The importance of identifying and fulfilling most people's desire to see immediate evidence of success

Audience questions revealed common concerns throughout the region. When panelists were asked to **identify the greatest unmet needs for economic development in their community or region** all cited affordable housing and education/training. In addition to responding to audience questions, the afternoon panelists described various local and regional economic development projects and programs.

The Pahokee Marina Project

Pahokee is one of the rare places where visitors can stand atop the Herbert Hoover Dike and see the lake. Mayor J.P. Sasser described the process by which his city's marina and campground were redeveloped to capitalize on that advantage. A diverse Marina Campground Committee conceived and carried out the project over seven years. The result today is an attractive marina to serve boaters, with launch ramps for local day-trippers, and amenities, such as a restaurant, to attract tourists and to serve as public meeting areas. It is operated by a public/private partnership that was able to obtain a long-term lease on state land and put together public and private financing. The private partner, Everglades Adventures, pays fees to the city, which because of its small tax base did not have the resources to repair hurricane damage to the existing marina or to construct and operate the new facility on its own. The South Florida Water Management District, U.S. Army Corps of Engineers, Palm Beach County, Florida Inland Navigation District, Florida Department of Environmental Protection and the Governor's Office cooperated in putting the venture together. The redevelopment project illustrates how a determined grass-roots effort can lead to development that enhances the community, preserves public use of the lakefront, and provides an impetus for diversifying the local economy.

Okeechobee's Main Street



Okeechobee Main Street Inc. is another grass-roots effort by local retailers, who are affiliated with the national Main Street program, to develop programs and projects to increase downtown commerce and promote the City of Okeechobee. The initiative draws heavily on the area's history and cultural identity to attract tourists and new dollars to the economy. Local President Maureen Burroughs, owner of Syble's Flowers and Gifts, described the use of welcome signs and festive banners, a now-annual art show, murals depicting the people and events that shape the area's heritage being painted on downtown buildings, a community Halloween festival and the annual "Day of the Cowboy" cattle drive and rodeo. The Okeechobee Main Street program has been one of the region's most successful organizations pursuing grants to augment local resources.

Lake Okeechobee Region's Economic Alliance of Palm Beach County



The Lake Okeechobee Region's Economic Alliance of Palm Beach County (LORE), based at the Belle Glade Chamber of Commerce, is an economic-development organization that sprang from a county-sponsored conference. LORE's President Ashley Tripp described the role of the organization as bringing representatives of local government, employers, social service agencies, business and civic organizations and community activists together to share information and support common initiatives. The latter include promotion of an annual series of extreme-sports "Adventure Races," the redevelopment of the Belle Glade marina following hurricane damage, and a program of grants to assist owners of downtown commercial buildings to paint and restore the facades of historic buildings to enhance the sense of community and give people reason to travel to the area.

LORE's efforts are operating in tandem with those of Palm Beach County, the South Florida Water Management District, the independent Palm Beach County Health Care District, the Florida Department of Transportation and related state agencies to build the regional infrastructure that is now required to enhance and increase commerce.

Florida Heartland Rural Economic Development Initiative



The Florida Heartland Rural Economic Development Initiative (FHREDI) is a federal-state initiative focusing on economic development and tourism in what is promoted as Florida's Heartland, which includes Lake Okeechobee. The state has designated the region as one of "critical economic concern." To attract high-paying jobs, Executive Director Lynn Topel said, the region needs to improve its infrastructure and educational opportunities. Of particular concern to FHREDI is regional access to broadband and high-speed Internet service. FHREDI is also urging the Florida Department of Transportation to help it create a self-supporting rural mobility plan and the region's community colleges to increase opportunities for higher education and job training.



FLORIDA CENTER FOR
ENVIRONMENTAL STUDIES

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APPENDIX

**Sponsors
Audience Questions
Speaker/Discussant Biographies
Participant List**



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Belle Glade, Florida
January 17, 2008

Audience Questions

The following questions are taken from the cards the audience submitted during the forum. They are categorized by topic. Although time did not permit posing every question to the panelists, most of the topics were covered during the discussion. The refreshment breaks and lunch also provided time for further discussion between panelists and attendees.

PHOSPHORUS AND LAKE SEDIMENTS

Given that the alternative stable state is unlikely to be stable for lakes if the in-lake water phosphorus concentration is above 100 ppb, and that attempts to control a shallow lake's system properties by regulating water levels will have limited results in achieving this clear, vegetated state until the internal nutrient loading is addressed, what is being proposed to address in-lake sediments?

Mr. Lodge mentioned that, historically, Lake Okeechobee contained very little sediments due to natural flushing. The current scenario includes excessive sediment contents that create destructive turbid conditions (which decimate flora and fauna) throughout the lake and Caloosahatchee/St. Lucie. What steps have been taken to reduce sediments inputs? How feasible is it to remove the current sediment inventory? Can Lake Okeechobee restoration ever be achieved without first addressing sediments?

Why isn't sediment removal (dredging) from the lake bottom a means of reducing phosphorus?

Why have "we" experienced years and years of reluctance or even refusal of the Department of Environmental Protection and the Department of Agriculture and Consumer Services to enforce state water quality laws in particular "source control"? What can be expected from enforcement – hopefully cooperatively – but effectively to reduce excessive phosphorus loadings flowing into Lake Okeechobee?

With phosphorus levels rising from target of 40 to 120 ppm due to inflows from the north, how long is it going to take to reduce/clean phosphorus inflows to the lake? How long is it going to take to clean Lake Okeechobee? What is going to be done on the lake this year in conjunction with the drought?

How can we expedite the clean up and hauling out of the muck in the lake bottom while it is now exposed in lieu of waiting till the rock is covered with water and then would have to be dredged?

Can the South Florida Water Management District pass a one-time emergency tax assessment for the district area to pump the muck out while the lake is low? Also, burn and de-muck the slopes mechanically. Max the millage or get the authority to do so.

The water management district has not maxed out their millage. The lake's immediate health depends on removing the muck now during this predicted extended drought, which costs money. Would you support maximizing the millage rate in the entire district for a 2 to 3 year period?

Why can't muck be removed then placed back in phosphate mine recovery areas? Talk only defines the problems; we need funding action to effectively implement known solutions.

Why can't removed muck be used on sugar fields? Muck in Palm Beach County has been reduced to cap rock in places. Why not put muck on these spots?

If muck burns why not use it as an alternative fuel in co-generation?

The concept that sediments must be dealt with or the lake cannot ever improve is a myth. The South Florida Water Management District has spent over one million dollars in feasibility studies that clearly indicate that sediment removal is not feasible from an economic, ecological or engineering standpoint. If lake levels can be managed below 15 feet we also know that sediments remain largely in the central pelagic zone. The recent re-focus on those sediments is related to impacts of very rare back-to-back catastrophic hurricanes of a magnitude not seen since the 1920's.

WATER STORAGE AND RELEASE

Today we naturally are focused on the drought and wondering what will happen if the lake drops to 8, 7 or 6 feet. Yet, for the lake's health, the most critical issue probably is how quickly water levels rise after the drought ends. To what extent have the respective agencies considered a pro-active approach to using controlled discharges, as inflows do resume, to temper a rapid rise in lake stage?

When can we expect better management and more coastal infrastructure to reduce or eliminate release of freshwater to tide?

If the Okeechobee watershed is incapable of storing significant amounts of rainwater into reserve water supply, and the only other option is to store major amounts of needed water supply, will the Corps of Engineers make an honest effort to study a connection from the lake to the southern Everglades Agricultural Area reservoir in order to spare the estuaries from massive polluted discharges?

Much of the discussion has been focused on water storage being a major solution. The District spent over \$200 million to purchase storage pits for water supply/environmental needs in eastern Palm Beach County. How much water is being stored? Is it of a quality to be used? If not, what are the solutions to solve that? Now that we are in a drought is that water available to supplement the regional system?

Is restoring the natural flow of the lake off the table? Wouldn't it give South Florida clean drinking water by restoring the aquifers?

LAKE RESTORATION AND MANAGEMENT

Clearly, given the range of social and environmental values of Lake Okeechobee, a multi-purpose solution to lake management is necessary. But multi-purpose solutions require maturity from stakeholders. Maturity to recognize that one hand washed the other - that healthy economies are tantamount to and dependent upon the ecological integrity of the lake. But also the maturity to understand that there is no single optimal state, that lake health is dependent on cycles of expansion and contraction. Recognizing this fact, what are each of the stakeholders doing today to recognize that we must all learn to live within the bounds and limitations provided by God and nature?

Dr. Gray briefly discussed ecological and societal values associated with the lake. How is social science research/data incorporated into lake management? Are you funding projects and devoting resources to capture these "human dimensions?"

The building block of an ecosystem is primary production. Ecologically desirable emergents, bulrush and spikerush are responding well to the low water. Thousands of acres of submerged plants, peppergrass and eelgrass have been extirpated from the system and are not reestablishing during low water. Even the exotic hydrilla has not established. Why is this occurring and how do we jump-start the submerged plants?

KISSIMMEE RIVER AND NORTHERN EVERGLADES RESTORATION

How can water supply in the northern Everglades help or hurt Lake Okeechobee?

When do you expect the next portion of backfilling of the Kissimmee River to begin? This is critical to any and all in-lake improvements.

Restoration of the historic bends of the Kissimmee and rehydration of the historic floodplain of the Kissimmee could provide 1.5 million acre-feet of storage in a “non-built” system. What will it take to accomplish this?

Everyone can agree that Lake Okeechobee and its watershed are priceless to the natural resources and agriculture of the system, and now it is estimated that we need about one million acre-feet of water storage upstream for “adequate” water supply downstream. How much real money should we invest in the upstream system to fix the water supply and water quality problems?

COMPREHENSIVE EVERGLADES RESTORATION PLAN (CERP)

Regarding restoration objectives for the entire South Florida ecosystem – how can you have a restoration end point of a 1970s lake (at 12' – 15') and no damaging flows to the estuaries, and appropriate flows to the Everglades, both of which are pre-drainage restoration end-points, when the lake was historically at 21 feet? Where are you going to find the loss of water storage, if aquifer storage and recovery technology, as proposed in CERP is not viable?

How will maintaining water levels in the lake and meeting the needs of the environment, human consumption and agriculture affect the future of the CERP?

How does soil subsidence and possible effects from development in the Everglade Agricultural Area affect the CERP?

HERBERT HOOVER DIKE

The discussion seems to focus on maintaining a healthy lake – a good thing! But the dike restoration opens the door for a reservoir. In all honesty, do you feel that, at the end of the day, demand for water will outweigh the desire for a healthy ecosystem?

Long before the Hoover Dike is repaired and allows higher water levels, temptation will rise to increase maximum water levels. Will the Department of Interior and the Corps of Engineers recognize their responsibilities – joint responsibilities under the Endangered Species Act?

With reference to Tom Lodge's talk, as we are preparing to restore the dike, is there a possibility to move the southern (reach 2 & 3) dike south to include some of the historic saw grass plain inside the dike for water quality treatment and habitat? What would need to happen to do that?

LAND USE AND LAND USE CHANGES

We are currently beginning to review our former aggressive draining activities. Can we capture 30 – 40% of the water we have previously drained for agriculture when we convert from agriculture to development?

The Colonel said the lake receives “six times the amount of water we can handle.” Can you stop draining wetlands when you convert from agriculture to development (new environmental resource permits)?

A mined out rock mine was recently purchased for water storage at a great expense to taxpayers. More of this could be done, hopefully at a lesser expense. Whoever, it is next to impossible to get a permit from the county and state to mine. Could this permitting process be improved?

What is the effect that the farming industry in the Glades has on the Lake? Does the burning of harvest land have an effect on the lake?

DRINKING WATER

Wouldn't desalinization plants for Broward, Dade and Palm Beach Counties alleviate many of the water shortage problems?

What percentage of the water in the new water treatment plant will be recycled water?

FUNDING

Regarding water quality, we in agriculture have been told that Best Management Practices (BMPs) are the best “on-farm” actions that we can implement. However, the cost share funding from the Florida Department of Agriculture and Consumer Services and the South Florida Water Management District are being decreased! How can leaders reverse this and actually have more funding appropriated and directed to on-farm BMPs?

What do you think will be the result of the limited funds that may be available for restoration efforts after property tax reform?

What effect will the 2 billion dollar state deficit have on the South Florida Water Management District's bond status for Accelerated projects?

FISHING AND TOURISM

What is the purpose of the new pumps being installed and who will benefit from the pumping?

Having fished the lake for almost 30 years I have seen what a mess the spraying has caused. Everything is and has been sprayed. Please don't tell me again the companies doing “their job” know how important the aquatic life is for the bass fishing of this great lake which is a “man made” disaster.

Why do we continue to have netting on the lake as gill numbers continue to go down?

Due to national negative publicity regarding the lake what efforts do you see to help the tourism business and county tourist development councils to reverse this negative image? More education regarding what is being done needs to get to the public not just agencies.

NAVIGATION

I hear very little discussion of dredging the Okeechobee Waterway to permit navigation while managing lake levels for other interests. Why is that? And are you aware of the negative economic impact?

How do you believe we need to address long term impacts to navigation from lake levels that prevent 35,000 boats that cross Florida, as well as the impact to businesses that rely on boating for their incomes? Should we deepen federal channels to always allow navigation across the state?

HISTORIC PRESERVATION

The low level of the lake provides a tremendous opportunity to identify, recover and document the historical and cultural resources found in Lake Okeechobee. What efforts are being made to protect these valuable historic and cultural resources?

In regards to Section FL.267 (state) and Section 110 & 106 NHPA (federal) what does the South Florida Water Management District and the U.S. Corps of Engineers have planned to minimize adverse effects on historic resources? No comprehensive historic resources list or survey has been undertaken for the lake.

How are the historic and prehistoric cultural resources being addresses in this planning process?

Audience Questions for Forging Alliances Panel

Okeechobee has promoted tourism. Is the low lake level a fatal blow? What's the recovery time?

How do the rural cities of wealthy Palm Beach County qualify for rural assistance?

What do local communities and organizations have to do to get consistent, dependable Internet service?

What happened to the Belle Glade Nature Center initiative?

How are lake communities reaching coastal populations so they can come learn about the lake, its importance and management issues? Where are nature centers around the lake?

How long will it be before we see new facades on buildings in Belle Glade, Pahokee, and/or Canal Point?

Are taxes an issue for your organizations? Is there a relationship between the tax base and the services you provide? Do taxes help grass roots organizations muster services and pr

BIOGRAPHIES & Contact Information

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ROLE OF THE LAKE

Thomas E. Lodge, Ph.D., CEP

Consulting Ecologist

Thomas E. Lodge Ecological Advisors, Inc.

2420 Indian Mound Trail

Coral Gables, FL 33134

Dr. Lodge is a self-employed ecologist with over 35 years of consulting experience. He grew up near Cleveland, Ohio, where he worked part-time from 1959 to 1966 for the Cleveland Museum of Natural History as the curator of fishes and later as an instructor in the museum's science program. He graduated with Departmental Honors in Zoology from Ohio Wesleyan University (1966), and completed his Ph.D. in Biology at the University of Miami (1974) where his dissertation involved the physiological ecology of Everglades' fishes.

Most of Dr. Lodge's work has been with environmental consulting firms. With a background emphasizing ichthyology and limnology, he has become a recognized ecologist specializing in wetlands and their restoration. He has conducted projects pertaining to freshwater and estuarine water quality; terrestrial, wetland, aquatic, and shallow marine environments, including considerations for rare, threatened, and endangered species, mitigation, and conditions such as noise and toxic contaminants. The primary applications of his work have been in federal, state, and local wetland permitting; Florida Developments of Regional Impact; and NEPA documents. He has considerable experience as an expert witness and is a Certified Environmental Professional (CEP) under the National Association of Environmental Professionals.

He is author of *The Everglades Handbook: Understanding the Ecosystem*, now in its second edition (2005), which contains a chapter on Lake Okeechobee and the Everglades headwaters. As was the first edition, the second edition is widely used as a college text and as a guide for lay people to understand the Everglades and its restoration. With a strong interest in wildlife photography, he is a regularly invited speaker on the Everglades.

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STATE OF THE LAKE

Dr. Susan Gray

South Florida Water Management District
PO Box 24680
West Palm Beach, FL 33416

Dr. Susan Gray is an aquatic biologist with the South Florida Water Management District with over 25 years of professional experience. She is currently the Deputy Director of the Watershed Management Department, and is the Program Manager for the Lake Okeechobee Restoration Program. In this capacity, Dr. Gray oversees the areas that include the Upper Kissimmee Chain of Lakes and Kissimmee River, Lake Okeechobee and the coastal estuaries. Dr. Gray has been with the SFWMD since 1992, and prior to coming to the District, she worked for an environmental consulting firm and for the Department of Environmental Protection. Dr. Gray received her B.A. and M.A. in Biology from San Francisco State University, and her Ph.D. in Biological Science from Florida State University

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DISCUSSANTS: Morning Session

Clif Betts, Jr.

Okeechobee County Commissioner
Chairman, County Coalition for the Responsible Management of Lake Okeechobee, the St. Lucie and Caloosahatchee Estuaries, and Lake Worth Lagoon (also known as 10-County Coalition)
5995 NE 120th St.
Okeechobee, FL 34972

Clif Betts, Jr., a local elected official since 1972, was raised in Okeechobee, and serves as Chair of the Okeechobee Board of County Commission, Chair of the Tourist Development Council, Chair of the 10 County Coalition for Lake Okeechobee and Chair of Work Force Development Executive Board for the Treasure Coast.

He enjoys all water sports, fishing, skiing, etc. He is a member of the Chamber of Commerce and is concerned with, "keeping our lake viable for my grandkids so they can enjoy the quality of life I've been afforded.

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Florida Agriculture Commissioner
Department of Agriculture & Consumer Services
PL 10 The Capitol
Tallahassee, FL 32399

Initially appointed to the position in May 2001 to fill the unexpired term of the outgoing Commissioner, Bronson was elected to the post in a statewide election in November 2002, and re-elected in November 2006. In addition to heading Florida's Department of Agriculture and Consumer Services, Bronson serves on the Florida Cabinet - a body that includes Florida's three statewide elected officials, as well as the Governor, and oversees state land-buying programs, clemency issues and directs the operations of several state agencies. Bronson is a former member of the Governor's Council on Efficient Government and a past President of the Southern Association of State Departments of Agriculture.

He has received numerous honors and awards including an FFA Honorary National Degree for outstanding personal commitment, a Nature Conservancy Legislative Leadership Appreciation Award, a Florida Farm Bureau Legislative Award, and both Florida Sheriff's and Florida Police Chief Association's Legislative Awards.

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Okeechobee Science Coordinator, Audubon of Florida
Post Office Box 707
Lorida, FL 33857

Paul started with Audubon in 1995 managing Audubon's Kissimmee Prairie, and Lake Okeechobee, Sanctuaries. Prairie work included prescribed burns, exotic plant control, security patrols and various restoration projects. Paul even got an Environmental Resource Permit for the Prairie Sanctuary, which was an education in itself. The Prairie Sanctuary now is part of the State Preserve and Paul focuses on Okeechobee and its sanctuaries, which were established in 1938 and have been maintained by full-time Audubon staff since.

The Audubon Society is more than 100 years old and its mission is to conserve and restore natural ecosystems, focusing on birds and other wildlife for the benefit of humanity and the earth's biological diversity. Paul's role is to work with agency technical teams on the various restoration efforts around the Lake, and to work with Audubon policy staff to make scientifically-sound and solution oriented recommendations on restoration options for the system. Audubon's 2007 Lake Okeechobee report is an example of this blend of science and policy that helped lead to a major re-assessment of Okeechobee's restoration needs.

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District Engineer
U.S. Army Corps of Engineers
701 San Marco Blvd.
Jacksonville, FL 32207-8175

COL Grosskruger is a graduate of the U.S. Army Engineer Basic and Advance Courses, the Combined Arms and Services Staff School, and the U.S. Army Command and General Staff College. He holds a Bachelor of Science degree in engineering mechanics from the

United States Military Academy, West Point and a Master of Science degree in civil engineering from Iowa State University. He is a registered professional engineer in the Commonwealth of Virginia. He recently attended U.S. Army War College, Carlisle Barracks, Pennsylvania.

His assignments include battalion S2 officer and company executive officer in the 317th Engineer Battalion, Eschborn, Germany; company commander and battalion S4 officer in the 82nd Engineer Battalion, Bamberg, Germany; company commander of the 535th Engineer Company (Combat Support Equipment), Grafenwoehr, Germany; project officer and deputy resident engineer in the Omaha Engineer District, U.S. Army Corps of Engineers, Colorado Springs, Colorado; battalion executive officer, 317th Engineer Battalion, Fort Benning, Georgia; group operations officer, 36th Engineer Group, Fort Benning, Georgia; Instructor, U.S. Army Command and General Staff College, Fort Leavenworth, Kansas; Chief of Engineer Operations and Assistant Corps Engineer, V Corps, Heidelberg, Germany; commander of the 94th Engineer Combat Battalion, Vilseck, Germany, where he planned and conducted operations in support of Operation Iraqi Freedom. His most recent assignment was as the Chief of Staff of the U.S. Army Engineer School, Fort Leonard Wood, Missouri.

COL Grosskruger's awards include the Bronze Star, the Meritorious Service Medal (sixth award); the Army Commendation Medal (three awards and "V" device); the Joint Commendation Medal; the Army Achievement Medal (fifth award); the NATO Medal; the Joint Meritorious Unit award; and the Humanitarian Service Medal. He has earned medals from Nicaragua and Poland. He has the U.S. and German parachutist badge and the air assault badge. His battalion earned the Presidential Unit Citation for service with the 3rd Infantry Division during Operation Iraqi Freedom.

Kenneth D. Haddad

Executive Director
Florida Fish and Wildlife Conservation Commission
Farris Bryant Building
620 Meridian St.
Tallahassee, FL 32399-1600

Ken is the Executive Director of the Florida Fish and Wildlife Conservation Commission (FWC). The FWC has responsibility for rule-making, management, enforcement, and science relative to fish and wildlife resources statewide. He is responsible for the leadership and management of the FWC and serves a seven-member Commission that has rule-making authority. He also serves as member of the state lands Acquisition and Restoration Council, Chairman of the Science Coordinating Group of the Everglades Restoration Task Force, is a member of the Executive Committee of the Association of Fish and Wildlife Agencies, President of the Southeastern Association of Fish and Wildlife Agencies, and secretary-treasurer of the Wildlife Foundation of Florida. He is also an appointed member of the federal Sportfishing and Boating Partnership Council. He has a Masters of Science in marine science from the University of South Florida and a B.S. in biology from Presbyterian College.

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Mary Ann Martin is owner and operator of Roland Martin's Marina and Resort in Clewiston, specializing in guided Lake Okeechobee Fishing excursions since 1981 for some of the best largemouth bass, blue gill and speck fishing in the world. An avid angler and Clewiston resident for 25 years, Ms. Martin brings a business and recreation perspective to many Lake Okeechobee civic, business and government advisory boards. She is an active board member of the Lake Okeechobee Tourist Development Council and member of the Clewiston Chamber of Commerce. She also serves as a member of the South Florida Water Management District Water Resources Advisory Commission Lake Okeechobee Committee, and serves as a member of International Game and Fish Association Advisory Board.

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Tom Pelham was appointed Secretary of the Florida Department of Community Affairs by Governor Charlie Crist on January 8, 2007. Working with Governor Crist and other state and local leaders, Secretary Pelham leads the Department's efforts to address and manage growth and development issues affecting Florida's cities, counties, and neighborhoods. As the state land planning agency, the Department's mission includes local comprehensive planning, growth management, and community development and revitalization.

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Mr. Pelham is an attorney and certified planner. He has more than thirty years of experience in working with Florida's planning, growth management, and environmental programs in a variety of capacities, including in private practice and as a Tallahassee-Leon County planning commissioner, teacher, and writer. Having worked with many local governments, developers, landowners, and citizen groups, Mr. Pelham brings a balanced perspective to the Department.

Mr. Pelham is also a past President of the Florida Chapter of the American Planning Association (FAPA) and was a member of FAPA's Executive Board for ten years. He is the recipient of the FAPA President's Award for Outstanding Service to the Chapter and the President's Award for Outstanding Service to the Planning Profession.

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Provost, Belle Glade Campus
Palm Beach Community College
1977 College Dr.
Belle Glade, FL 33430

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Miccosukee Tribes. COL Salt's primary duties included coordinating Everglades restoration policy among the seven federal departments, synchronizing restoration efforts among federal, state, tribal, and local government programs, advising field agencies on emerging ecosystem management policy, and developing interagency budget documents.

COL Salt graduated from the United States Military Academy at West Point and was commissioned as a second lieutenant in the U.S. Army in June 1966. He is a graduate of the Army's Airborne and Ranger Schools, the Army Command and General Staff College, and the National War College. He received a Master of Science degree in physics from the University of Colorado in 1972. He retired from the Army on July 1, 1996 and continued as Executive Director of the Task Force and subsequently as Director Everglades Restoration Initiatives as a civil servant with the Department of the Interior.

In his last assignment in the Army, COL Salt served as District Engineer of the Corps of Engineers' Jacksonville District. His Army career included a variety of command and staff assignments in the United States, Germany and Vietnam. He served as deputy commander of the Corps of Engineers' Walla Walla District and as commander of the 87th Engineer Battalion at Fort Leonard Wood, Missouri. In Washington, D.C., he was assigned to the Pentagon in the Office of the Deputy Chief of Staff for Operations and Plans on the Army Staff, and led the strategic planning initiative on Nation Assistance for the Chief of Engineers.

He is married to the former Heather Ann Miller. They have four children; Patrick, John, Charles, and James.

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Secretary Michael W. Sole

Department of Environmental Protection
3900 Commonwealth Blvd.
M.S. 10
Tallahassee, FL 32399-3000

On December 21, 2006, Governor Charlie Crist named Michael W. Sole as Secretary of the Florida Department of Environmental Protection. As Secretary, Mr. Sole oversees Florida's environmental regulatory and law enforcement programs, the acquisition, conservation and management of public lands, including Florida's award-winning state parks, and the development and regulation of Florida's water resources through the State's five water management districts.

Recently, Governor Crist appointed Secretary Sole as Chairman of the 21-member Florida Governor's Action Team on Energy and Climate Change. Under the leadership of Secretary Sole, the Action Team submitted the Phase One report on November 1, 2007. The report includes 35 findings and 30 recommendations regarding Florida's energy policy and incorporating greenhouse gas emission reduction strategies into Florida's energy future.

Secretary Sole has served the Department since 1991, most recently as Deputy Secretary for Regulatory Programs and Energy where he spearheaded the 2006 Florida Energy Act - the four-year, \$100 million plan to diversify the state's fuel supply and promote energy conservation and efficiency.

Prior to his appointment as deputy secretary, Secretary Sole served as the Department's chief of staff and also as the director of the Division of Waste Management. As Director, Mr. Sole was responsible for implementing state and federal laws relating to solid and hazardous waste management, storage tank regulation and the cleanup of contaminated sites. A long time advocate for Florida's environment, Secretary Sole began his career in environmental protection as a biological scientist for the Florida Department of Natural Resources. During his sixteen years as an environmental manager he has undertaken responsibilities ranging from marine turtle protection and invasive plant management to beach preservation, wetland protection and petroleum cleanup.

Secretary Sole was a Captain in the United States Marine Corps, serving our nation during the Gulf War. He received his Bachelors of Science degree in Marine Biology from the Florida Institute of Technology.

Secretary Sole, wife Jeannie and daughter Samantha are all native Floridians and enjoy scuba diving and visiting any one of Florida's more than 150 state parks during family outings and vacations.

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Malcolm S. "Bubba" Wade, Jr.

Senior Vice President of Sugar Operations
U.S. Sugar Corporation
111 Ponce de Leon Ave.
Clewiston, FL 33440

Malcolm Wade is Senior Vice President of Sugar Operations for U.S. Sugar Corporation. He was appointed to the Board of the South Florida Water Management District in March 2005, serving to March 2009. He also serves as Co-Chairman of the Water Resources Advisory Committee (WRAC) and is a member of the Land Resources Committee at the District.

A graduate of Florida State University, Wade has also served on the Governor's Commission on the Everglades (appointed by Gov. Bush); Governor's Commission on Sustainable South Florida (appointed by Gov. Chiles); Lower East Coast Water Supply Planning Committee, SFWMD; Budget Review Commission, SFWMD; Caloosahatchee Water Management Advisory Committee; Everglades Technical Mediation Group, Technical Mediated Plan for Everglades Restoration; and as Director of the Everglades Agricultural Area Environmental Protection District.

His professional and business affiliations include: Member, American Institute of Certified Public Accountants; Member, Florida Institute of Certified Public Accountants; Member,

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Growing citrus introduces other complexities, such as the large quantities of water needed for irrigation, a need that has been supported for nearly 10 years by an agreement with the Okeechobee Utility Authority that lets the Williamsons use treated water reclaimed from the Okeechobee area. Studied and declared safe by the University of Florida, the water is clear and clean, and its use helps both agriculture and the local urban community.

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J. P. Sasser

Mayor J.P. Sasser, a life-long resident of Pahokee, has served three two-year terms as Mayor of Pahokee. He is comptroller of Cavinee's Body Shop in Belle Glade.

He is a member of the Pahokee Rotary and was recently appointed by the Palm Beach County League of Cities to represent the Glades-region District 5. He was a participant in the first Water Summit held by the South Florida Water Management District on the management of Lake Okeechobee and discharges made to coastal estuaries.

In its September 2007 article about Lake Okeechobee, Florida Trend magazine wrote: "Pahokee's survival plan hinges on a public-private venture formed to do a \$22 million rebuilding and expansion of the city's lakeside campground, marina and amenities. But the Corps' [of Engineers] initial plan conceived building a berm around the dike at Pahokee, and much of Pahokee's tax base was in the way. Sasser complained. Corps Jacksonville district chief of construction and operations Alan Bugg says a berm will be part of dike rehabilitation elsewhere but innovative designs will spare Pahokee homes and businesses."

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Maureen Burroughs

President, Okeechobee Main Street Inc. and
Owner, Syble's Flowers and Gifts
119 South Parrott
Okeechobee, FL 34972

Maureen moved to Okeechobee in 2001 after retiring with 31 years in Product Management from Telcordia Technologies (Formerly the Bell System). Maureen was born and raised in Boston and in the last 15 years worked in Manhattan, New Jersey and Atlanta. Raising a son and traveling internationally did not leave time for any community involvement.

Needless to say, the move to Okeechobee was a culture shock. She assumed her mother-in-law's florist business, which was in a downward spiral but had been a mainstay in the community for 42 years. She created a wedding chapel and the city's largest gift store in conjunction with growing the flower business. In 5 years she has managed to overcome the debts and has tripled the revenues.

She is an active member of Kiwanis, Okeechobee Business Women's Network, Economic Council member, a Big Sister and the President of Okeechobee Main Street, Inc.

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Ashley T. Tripp

President, Lake Okeechobee Regional Economic Alliance of Palm Beach County, Inc. (LORE) and
Owner, Tripp Electric Motors Inc.
1233 NW Avenue L
Belle Glade, FL 33430

Ashley Tripp is a life-long resident of Belle Glade and civic advocate for the Lake Okeechobee region of Palm Beach County. She served in US Army Reserves and attended Palm Beach Community College and Palm Beach Atlantic University majoring in biology and secondary education. She and her husband, Jimmy Tripp, own and operate Tripp Electric Motors, Inc. She has a passion to see her community prosper and grow by

enhancing and optimally using its resources. She has been active in her community by serving in the following capacities:

- President and founding member of the Lake Okeechobee Regional Economic (LORE) Alliance of Palm Beach County, Inc.
- Served on the Quality of Life Committee for PBC 2005 Economic Summit
- Served on the Western County Health Advisory Committee for the Health Care District of PBC
- Glades Historical Society Board Member
- Belle Glade Museum Board Member
- Former Belle Glade Chamber of Commerce Board Member
- Volunteer at PBSO Eagle Academy leading a weekly Bible study
- Local coordinator for Keep Palm Beach County Beautiful's annual Coastal Cleanup of Lake Okeechobee on Torry Island

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Lynn Topel

Executive Director

Florida's Heartland Rural Economic Development Initiative, Inc. (FHREDI)

& Florida's Freshwater Frontier

P.O. Box 1196

Sebring, FL 33871-1196

Lynn Topel is responsible for the continued development of the regional economic development organization to a provider network that encompasses all areas of business and government in its partnerships. She is also responsible for creating a continuous funding stream that enables the organization to fund marketing, educational programs, business outreach, and create strong governmental partnerships.

Lynn's background includes 28 years with a fortune 100 company, spending much of her career in sales and management development. She retired from there to work with a small Entrepreneurial company to restructure the organization to a structured environment, developing and implement training programs for six departments, hire and develop a management team, assisted in the creation of a new division and development of a training academy. She holds a Bachelors degree in Professional Studies and a Masters in Human Resources & Development from Barry University in Miami.

Participant List
Decision Makers Forum
Lake Okeechobee: Headwaters of the Everglades
January 17, 2008
Belle Glade, Florida

Danna Ackerman-White
Senator Dave Aronberg
Greenacres, FL 33463

Lauren Aiello
Florida Department of Environmental
Protection
Tallahassee, FL

Joe Arnold
Chairman, Okeechobee County School
Board
Okeechobee, FL

Alberto Arrieta
South Florida Water Management District
West Palm Beach, FL

Craig Ash
Cepemar Environmental Services
Boca Raton, FL

Michael Baker
Lake Worth Drainage District
Delray Beach, FL

Frederick Barber
Agnoli, Barber & Brundage, Inc.
Naples, FL

Amber Barritt
CDM
West Palm Beach, FL

Clif Betts Jr.
County Coalition for the Responsible
Management of Lake Okeechobee
Okeechobee, FL

Betty Boyer
Edge Center
Belle Glade, FL

Charles Bronson
Department of Agriculture and Consumer
Services
Tallahassee, FL

Stan Bronson
Florida Earth Foundation
West Palm Beach, FL

Eric Buermann
South Florida Water Management District
West Palm Beach, FL

Maureen Burroughs
Okeechobee Main Street
Okeechobee, FL

Jennifer Busbin
Okeechobee County
Okeechobee, FL

Michael Bush
USDA NRCS
Fort Pierce, FL 34945

Gail A. Byrd
Florida Inland Navigation District
Stuart, FL

Nicholas Campbell
Pine Crest School
Boca Raton, FL

Gaston Cantens
Florida Crystals Corp.
West Palm Beach, FL

John Childe
Friends of the Everglades
Miami, FL

Sharon Clark
Pioneer Park Beacon Center
Pahokee, FL

Jamie Coker
Miller Legg
Winter Park, FL

Charles Collins
Florida Fish and Wildlife Conservation
Commission
West Palm Beach, FL

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Lykes Bros. Inc.
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David C. Cook
South Florida Conservancy District
Belle Glade, FL

Patricia G. Cooper
Superintendent of Schools
Okeechobee County
Okeechobee, FL

Ed Copeland
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Charles Corbin
Slim's Fish Camp
Belle Glade, FL

Laura Corry
South Florida Water Management
District

Pete Coultas
A. Duda & Sons, Inc.
Oviedo, FL

Ronald Crone
Lake Worth Drainage District
Delray Beach, FL

Lenelle Crowell
Florida Earth Foundation
West Palm Beach, FL

Christian Davenport
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West Palm Beach, FL

Joanne Davis
1000 Friends of Florida
Lake Worth, FL

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de la Parte & Gilbert, PA
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Martin County
Stuart, FL

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Terrence S. Dolan
Lykes Land Investments, Inc.
Naples, FL

Toni Doyle
Okeechobee Main Street
Okeechobee, FL

Dennis Duke
Department of Interior
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Alana Edwards
Florida Center for Environmental Studies
Jupiter, FL

William Eichelroth
Housing Partnership
Belle Glade, FL

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Carolyn Farmer
BCI Engineers & Scientists, Inc.
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