

Just Add Water:

**Initiating a Watershed Restoration Dialogue
with Upper Kissimmee Basin Agricultural Landowners**



OCEAN RESEARCH & CONSERVATION ASSOCIATION

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On September 30, 2009, the Ocean Research & Conservation Association (ORCA) conducted a first of its kind gathering at the Florida Cattleman's Association Kissimmee headquarters to identify and explore promising conservation strategies for promoting private landowner leadership in Everglades and coastal ecosystems restoration.

Who Came –The day brought together a unique group of more than twenty Upper Kissimmee Basin agricultural landowners representing 100,000-plus acres of private lands along with local and national experts on the region's ecosystems, as on well as tax and public policy issues.

Why They Came – They came to participate in a joint discussion seeking practical and cost effective solutions that would achieve the dual goals of:

- Improving the water quality and controlling the volume of fresh water flowing out of the Upper Kissimmee Basin into Lake Okeechobee, the Everglades, and coastal estuaries.
- Creating the conditions necessary to accomplish the natural resource goals listed above, while protecting the property and other rights and future business interests of agricultural landowners through common sense public-private solutions.

What They Learned – Successful marine conservation in southeast Florida will require the mutually beneficial public-private partnerships that will enable Upper Kissimmee Basin landowners to help reduce the flow of fresh water into Lake Okeechobee and ultimately the St. Lucie River and southern Indian River Lagoon. “Since most water pollution comes from the land, if marine conservation does not work for landowners, then marine conservation will not work,” stated Keith Paglen, Co-founder & CEO of ORCA. “Our purpose today is to learn from the landowners, who are the stewards of the land, about ways to retain water on their land without getting whipsawed in the process. The result will be a land to sea conservation solution.”

How They Organized Their Discussion – The day was divided into two sessions:

- The morning was spent learning more about how man-made changes to the way water drains from the Upper Kissimmee Basin are wreaking havoc on coastal ecosystems. Experts in land use, tax law, and natural systems management discussed the obstacles and some opportunities for potential public-private, market-based strategies that would help correct those natural systems impacts while benefiting landowners.
- In the afternoon, landowners focused on identifying and evaluating the most promising of those strategies, exploring additional measures that would make it easier and more appealing to adopt the strategies, and identifying the next steps to further develop or implement them.

A Morning of Learning from Each Other

Topics for the morning presentations were organized to:

Set the stage – the problem that needs fixing: the quantity and quality of water flowing from the Upper Kissimmee Basin into Lake Okeechobee and from it into coastal ecosystems and the Everglades. That responsibility went to Paul Millar, Martin County's Water Resource Manager and staff to the County Coalition that advocates the responsible management of Lake Okeechobee, the Lake Worth Lagoon, and the St. Lucie and Caloosahatchee Rivers and Estuaries.

Learn more about watershed ecological issues – the impacts to the Lake Okeechobee Watershed (Dr. Paul Gray, Okeechobee Science Coordinator, Audubon of Florida, who participated by sharing his thoughts in a letter to participants), and the impacts to the Indian River Lagoon – one of America's most biologically diverse estuaries (Dr. Edie Widder, ORCA's Co-founder, President, & Senior Scientist).

Review financial and regulatory approaches related to water restoration – Speakers covered a full range of topics: federal agricultural lands conservation programs that involve paying landowners for conservation easements (Jerry Joiner, Joiner Consulting); creative rural lands planning approaches designed to conserve natural resources (Ernie Cox, Family Lands Remembered); and business and tax issues (Michael Minton, Dean, Mead, Minton and Zwemer).

Understand more about ecosystem services and markets – a subject covered by Dr. Len Shabman, Associate Director of the Florida Ranchlands Environmental Services Project (FRESP) collaboration.

An Afternoon of Dialogue

In the afternoon, participants engaged in a facilitated discussion designed to help them identify and evaluate the most promising strategies from the morning. A particular focus was on exploring the measures or approaches that would enable landowners to participate in implementing those strategies. They also discussed the next steps to keep the dialogue going.

In addition, they heard from Florida Agricultural Commissioner Charles Bronson who offered concluding reflections on the day: “We are proud that Florida agriculture is a part of the emerging dialogue about the ecosystem services strategies that will provide farmers with the diversified income stream that will help keep land in agriculture and achieve important environmental goals.”

Forum coordinator Kimball Love, TetraTech, Inc., summed it up when she described the rationale for the September 30 forum: “The common sense approach starts with storing more water, longer, at the top of the ecosystem using practical, economically and environmentally sound strategies. The public gains a more cost-effective, sustainable way to address critical water restoration needs, our fragile ecosystems are restored, and agricultural landowners sustain their land values and gain new revenue streams.”

***Follow the Water:* The Problem and the Solution**

“What we are doing to our water is not unlike the children’s game pick-up sticks. If you keep taking sticks out, eventually they all collapse,” Edie Widder told participants. The Lake Okeechobee watershed is in trouble because of the volume and poor quality of water going into and out of it. The common sense antidote is a natural solution that looks to Upper Kissimmee Basin landowners to voluntarily store water on their land, thereby reducing the flow of freshwater and harmful nutrients from the Upper Kissimmee basin into the Lake and on into the Everglades and the St. Lucie and Indian River Lagoon ecosystems.

The Problem to Fix: Green, Not Blue Water

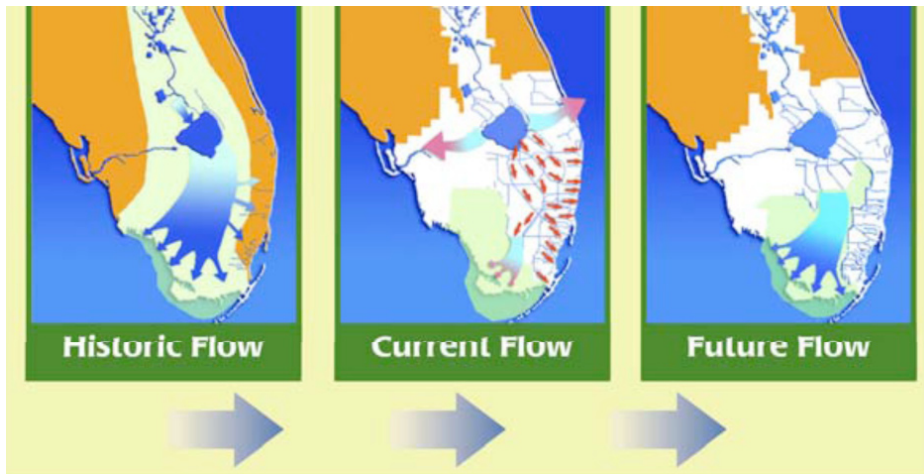
Understanding the water problem that needs to be fixed requires picturing the plumbing of central Florida. Historically, the Kissimmee River meandered some 103 miles from Lake Kissimmee to Lake Okeechobee through a wide floodplain and a mosaic of wetlands that held water over extended periods of time. From the Lake, the water primarily flowed south into the Everglades.

The historic flow from the Upper Kissimmee Basin was significantly altered in the 1960s when the Corps of Engineers drained some two-thirds of the historic Upper Kissimmee floodplains and built dikes, canals, and pump stations to get stormwater out as quickly as possible. And their plan worked. In high rain events, instead of being held for an extended period, water from the Basin, as well as the phosphorus and nitrogen it transports from the land, flows unimpeded into Lake Okeechobee.

As a result, the Lake quickly becomes deep enough to create safety concerns for the Hoover Dike and the Corps of Engineers is compelled to make massive estuary-choking releases to avert the danger as soon as possible, Paul Gray noted in post-forum comments. Those releases contain some of the highest levels of phosphorous of any waterway in the state – levels that far exceed federal and state standards. Ironically, Gray noted, after the large



Lake Okeechobee is Florida’s liquid heart. What goes into it and what comes out have far reaching, long-term impacts on the entire watershed, including sensitive coastal ecosystems.



The ecological health of the St. Lucie River and the Indian River Lagoon has been increasingly degraded with the diversion of Lake Okeechobee outflow to the east coast.

dumping events, ensuing droughts result in severe water rationing for the region's farms and utilities, highlighting a water management system that now is failing all stakeholder groups.

The problem for coastal estuaries stems from what happens to the water flowing out of the Lake. Much of that water (and the high levels of phosphorous, nitrogen, and silt it carries) is currently diverted to the Atlantic coast via the St. Lucie Canal (the C-44), the St. Lucie River, and ultimately the Indian River

Lagoon, where the nutrient inputs have a detrimental impact on estuarine flora and fauna and marine life. The quicker and higher the rate of rainfall, the faster the water and damaging nutrients travel into receiving water bodies.

The resulting algae blooms lead to fish kills, toxic red tides, sea grass mortality and severe stress for dolphins, sea turtles, and manatees. Skin lesions, tumors, and eventual death are not uncommon results. On the human side, fishing, swimming, and other recreational water uses are impacted and odors from the toxins emitted can negatively affect human health and property values.

Reducing or possibly stopping the harmful dumping of Lake outflows to restore damaged coastal ecosystems requires going back up the system to the Upper Kissimmee Basin where the nutrient-laden water flowing into the Lake originates and holding the water there longer. "We now know that in a high rain event we need natural solutions to holding the water in the Upper Kissimmee Basin where it originates and cleaning it before it is slowly discharged to the Lake," observed Paul Millar.

The Solution: Stitching What Nature Planned Back Together Again

The common sense route to holding the water longer in the Upper Kissimmee Basin involves an effort to recreate, at least in part, its historic hydrological conditions. Through a regional public/private partnership, large tracts of private lands now in ranching and farming, along with contiguous public lands located near or on contributing waterways, could be used to restore those conditions. Collectively those lands could retain, slow down, and improve the quantity and quality of fresh water flowing into Lake Okeechobee and from there to the St. Lucie and Indian River ecosystems and the Everglades.

Storing water on the land also offers a very cost-effective way to provide the ecological services that will help attain state and federal Total Maximum Daily Load (TMDL) requirements. It also provides a cost-effective and environmentally sound way to make available a considerable portion of the one million acre-feet of water storage that the South Florida Water Management District (SFWMD) is seeking in the Lake Okeechobee watershed. (An acre-foot of water storage is enough water to fill one acre of land one foot deep.)

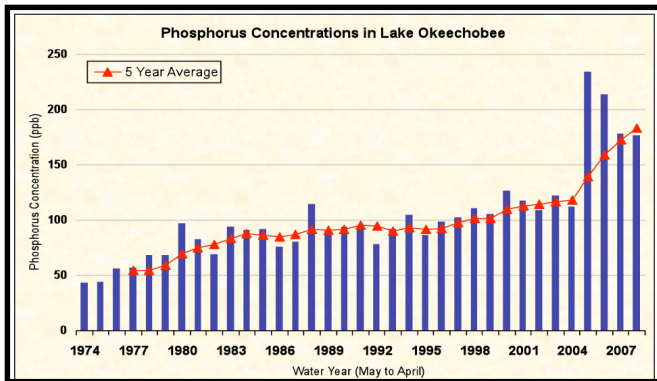
In addition to providing a more cost-effective way to store water and meet TMDL requirements, storing water on the land offers multiple public benefits: it recharges aquifers, enhances habitat, supports agriculture, helps make coastal estuaries healthy again, and promotes economic development by enhancing opportunities for hunting, fishing, and boating. For agricultural landowners, dispersed water storage and management could become new revenue sources in their business plans.

"We want our watershed to be green, not our waterways. Finding a way to enable Upper Kissimmee Basin landowners to store water on their land gives us a shot at making our water blue again."

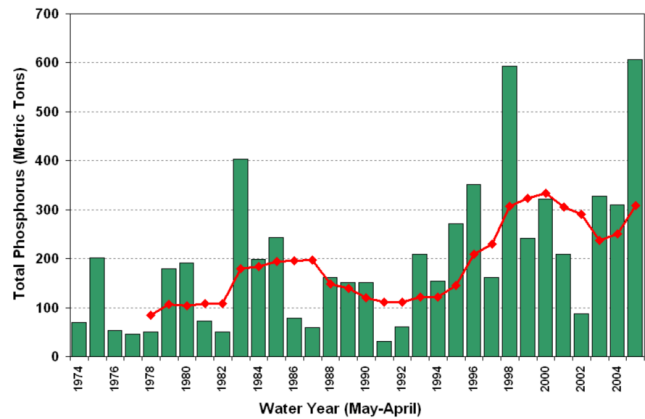
Dr. Paul Gray

The Upper Kissimmee Basin is uniquely qualified to provide much of the storage needed to improve water quantity and quality. It is located at the top of the water system, contains an estimated 815,000 acres of working and public lands, and releases large loads of phosphorous to the lower Lake Okeechobee watershed. (November 8, 2007. Lake Okeechobee Phase II Technical Plan, Water Quality and Features Summary by Sub-Watershed presentation, slides 3 and 5. SFWMD Water Resources Advisory Commission.) As evidence, Lake Kissimmee's phosphorus levels have roughly doubled in the past 15 years, which, if allowed to continue, could threaten the success of the Kissimmee River Restoration effort.

The practice of water quality credit trading to meet TMDL requirements could also be part of a rancher or farmer's business plan and lead to the restoration of the Kissimmee and Okeechobee basin system. (TMDL determines the greatest amount of a given pollutant that can be allowed in a given lake or stream.) A water quality trading system recognizes that the cost of controlling a pollutant can vary greatly. Because agricultural producers can usually reduce pollutant levels at a much lower cost using conservation measures, in a trading program they could sell credits to an emitter that would have much higher pollution control costs. The results are improved water quality at a lower overall cost and a new revenue stream for a landowner.



South Florida Ecosystem Report 2009, Chapter 10. SFWMD



SFWMD presentation to Water Resource Advisory Commission, Lake O subcommittee 11-30-05 (Cal Neidrauer)

Increased Lake outflows and higher concentrations of phosphorous have led to increasing detrimental impacts on coastal ecosystems

The Economic-Regulatory Context

After hearing about the water problems and the benefits of water storage, forum participants learned about the economic and regulatory context for storing water on agricultural lands. The programs and planning approaches that were discussed are highlighted below and outlined in more detail in Appendix One of this forum summary. They included supportive federal programs, important business and tax issues, and a sampling of creative rural lands planning initiatives in Florida.

Supportive Federal Programs – Federal programs are now the primary source of funding for conservation initiatives, Jerry Joiner noted. The U. S. Department of Agriculture's Natural Resources Conservation Service (NRCS) administers a number of supportive programs that could be used in combination with storage for restoration purposes. Those programs also demonstrate an important principle behind the concept of ecosystem services and markets: compensating landowners for providing services that have offsite public benefits on their land (for example, water storage). A sampling of NRCS initiatives includes the Wetland Reserve Program (60 Florida ranchers have enrolled some 200,000 acres in the program statewide), the Grassland Reserve Program, and the Farm and Ranch Land Protection Program.

Important Business and Tax Issues Associated with Water Restoration Projects – Michael Minton highlighted a number of business and tax issues that need to be addressed when considering additional storage. Some have to do with how a landowner sells or grants access to land for environmental enhancement. Options include transferring land in fee or less than fee (will become more common with less public funding for acquisition), leasing the land, or granting an agency a license to use and occupy a specified land area for certain activities.

Two additional business issues are 1) determining the value of storing an acre-foot of water and allowing access to the stored water and 2) assessing the potential liability for the possible adverse impacts of water storage on the remaining and surrounding land as well as land downstream. Creating agricultural utilities or water control districts are ways to address concerns about liability. A water control district could also make improvements and perform services related to water storage.

If the district is established as a non-profit corporation, it could receive grant payments from governmental agencies; if it is a for-profit corporation, payments received for capital improvements from a non-share holder might be exempt from income tax under the Internal Revenue Code.

Creative Approaches to Planning for Rural Lands –

Ernie Cox reviewed several examples of local, state, and federal programs designed to conserve important natural resources. Collier County's Rural Land Stewardship Area (RLSA), the Babcock Ranch conservation design plan, the St. Lucie County RLSA Overlay, and the Hatchineha Lakes conservation project were the four local examples. Each project began with identifying the important natural areas that should be protected and conserved. The intent of the RLSA programs is to conserve those lands without the use of public funds by transferring development to appropriate receiving areas. Babcock Ranch used a combination of public acquisition funding from the state of Florida and Lee County, along with a large scale comprehensive plan amendment for a sustainable mixed-use community on the lands not being acquired. Ultimately, approximately 90 percent of the 91,000 acre ranch will remain in conservation and agricultural uses.

Federal and state examples of creative approaches to conservation include the United States Fish and Wildlife Service's (USFWS) Safe Harbor Program that provides private landowners with assurances that they will not be penalized by endangered species laws when they manage their land to conserve listed species and the Florida Fish and Wildlife Commission's (FFWC) Cooperative Conservation Blueprint (CCB). That program, when completed, will provide a GIS-based data set depicting priority statewide conservation areas and a complementary package of landowner incentives intended to make conserving those lands a financial plus for landowners by compensating them for providing services in the public interest.

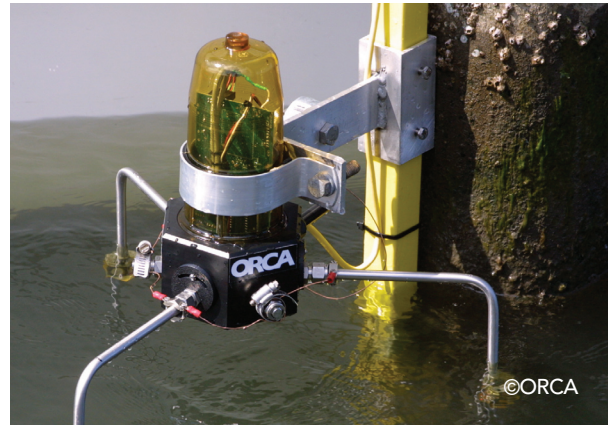
Ecosystem Services and Markets

In an ecosystem services market approach, farmers and ranches would earn a portion of their living from producing environmental services that are required to serve the broader community. They do that by engaging in conservation practices that result in the desired environmental benefits. In this form of incentive, crops are viewed as only one of a range of products associated with the benefits of agriculture and the rural lands that agriculture maintains.

In his forum comments, Dr. Len Shaman described a payment for environmental services (PES) program that is currently being developed for possible implementation in Florida. That program is FRESF, which envisions state agencies making payments to landowners in the Okeechobee watershed who document that they can and have provided water retention and nutrient reduction services.

The FRESF Collaboration – Members of the FRESF collaboration have been working together since 2004 to design a PES program. Members include eight ranches in the Okeechobee watershed, the World Wildlife Fund, the Florida Department of Agriculture and Consumer Services, the SFWMD, the Florida Department of Environmental Protection, the United States Department of Agriculture (USDA), the Natural Resources NRCS, and researchers from the University of Florida and the MacArthur Agro-Ecology Research Center.

Concept – In the FRESF, landowners enter into fixed term contracts (as opposed to having permanent conservation easements placed on the land) with state agencies to provide water-related environmental services and habitat above and beyond regulatory requirements, thereby creating a new profit center for ranching enterprises.



As depicted in the image above, ORCA's innovative Kilroy technology (named for the World War II character that was always there first) provides a real time, low-cost, and easy-to-install wireless way to accelerate coastal monitoring. The goal is to produce data that are as widely accessible and understandable as the weather map on the evening news. At a quick glance, the viewer can see a pollution event and understand the source. Kilroy technology can be used to understand what pollution reduction strategies are working or not working. The St. Lucie Estuary is the location of a Beta Kilroy test site. For more information about ORCA and Kilroy, go to www.teamorca.org.



Photo by Steve McCulloch, Harbor Branch Oceanographic Institute



"Rivers Coalition" website (<http://riverscoalition.org/>)

Healthier coastal ecosystems will be the long term result of using "on-farm" water storage in the Upper Kissimmee Basin to store larger quantities of water for a longer period of time. The swimming warnings at the St. Lucie boat ramp (above) and photos of dolphins with lesions will only be in history books.

A Sampling of Comments by Speakers:

"The issue is how to keep fresh water from going out to tide and how agricultural landowners can make money doing that."

-Ernie Cox

"If landowners are to remain in agriculture, they need a survival plan that involves mutually beneficial public-private partnerships."

-Jerry Joiner

"Local government pockets are empty; therefore, public-private partnerships that achieve the same service for a lower cost are needed."

-Paul Millar

"One way of advancing the practice of storing water on the land is creating a water control district or agricultural utility that could help facilitate the process."

-Michael Minton

"Having Upper Kissimmee Basin landowners retain water on their land is a very promising idea. We now need to design a program that works and can be combined with other conservation programs."

-Dr. Len Shabman

"All interests need to be involved in a collective conversation. We are all stewards when it comes to our land and water resources."

-Dr. Edie Widder

Service Valuation and Selection – As currently envisioned, in order to participate in the PES, ranchers might respond to an agency-issued request for proposals. That request would specify what services the agency wants and the conditions that the ranchers must meet. In that approach, rancher-sellers would consider profit opportunity, the contract length, and other issues such as how to produce the service requested and the required revenue over time. The agencies would then select from a pool of eligible ranches based on service potential, cost per unit of the service offered by the rancher, and other criteria.

Lowering Barriers – FRESP is developing tools that can be readily applied at a low cost to achieve the following:

- Assess the potential of a site to provide services.
- Determine the profitability of participating in a PES program.
- Assess the effects of water management on other ranch operations.
- Evaluate opportunities for new enterprises that might be made more practical as a result of increased water retention.
- Document that the service has been provided as a basis for payment.

In addition, FRESP has been working with federal and state regulatory agencies to ease the application process, to assure there will be no regulatory surprises for ranchers who enter into contracts as sellers of services, and to ensure that there is no unacceptable release of phosphorous as a result of on-ranch water management activities.

Subsequent to the September 30 Just Add Water Forum, the SFWMD Board of Directors voted to support FRESP and work with the FRESP partners to resolve outstanding issues and, after that, move forward with an implementation program.

Creating a Foundation of Promising Ideas

Following the presentations, forum participants focused on issues and potential strategies, information needs, and next steps.

Issues and Potential Strategies

In a question/answer period following the morning presentations, forum participants raised a number of issues and discussed strategies needed to address them.

One cluster of comments centered on the upfront cost to a landowner of evaluating the potential suitability and profitability of water storage and other possible ecosystem services, determining eligibility for existing programs, the market value of water retention, and concerns about liability.

Assessing the Suitability and Profitability of “Just Add Water” – Landowners considering participation in water storage and treatment programs would benefit greatly from more information on how to determine what lands are suitable and how many acres are required in order to be profitable.

Cost of Applications to Participate – The cost of preparing applications to participate in water storage programs is potentially quite high. Determining who pays for those costs is an important aspect of making participation easier for landowners. The current scenario requires that the rancher pay for the upfront engineering costs. Those costs can be recouped in a negotiated contract if an application is approved. However, if the application is not approved, the landowner would not have a way to recover the costs. That alternative is unacceptable to the landowners. Pre-qualification, clear criteria for participation based on geography and size of parcel, and a simpler, more streamlined application process are other ways to help address that problem. Another way to reduce landowner “entry” costs is for the District, the NRCS, or the Florida Department of Environmental Protection to provide assistance with the evaluation and application process.

Determining the Market Value – Because retaining water on ranch lands is a new approach, the market value for that form of storage will need to be determined. For the FRESP PES design, the collaborators have asked landowners to provide a cost per-acre foot of water treated. One alternative to that approach is for the SFWMD to determine the value by providing information on its current or projected cost of storing an acre-foot of water and removing phosphorous. If that approach to establishing market value is preferable, landowners need to request that cost information from the SFWMD. Landowners can then use that information to determine if they can store the water at a lower cost. The information could also be useful in securing political and public support for storing water on the land. Another alternative is to have landowners identify other forms of compensation that complement their business models.

Assessing Potential Liability – Understanding the potential adverse impacts of water storage is an important part of water storage homework. Risk assessment should take into account what impacts could occur on the remaining land, surrounding land, and downstream land (for example, if a berm built to store water breaks). Aesthetics are also a consideration (for example, if the water storage area is vacant during dry months). The value landowners receive should cover the costs associated with the potential risks of storing water on their land. A longer-term strategy to address this issue might include legislation defining and limiting liability.

A second cluster of comments centered on ways to create additional value for landowners engaging in storing additional water on their lands.

Ability to Layer Incentives – Landowners engaged in water storage should be able to receive value from more than one source, and that ability to layer incentives should be specified in any enabling legislation. An offsite public benefit should receive an onsite incentive. Examples of incentives that could be layered together include income from wetland and/or habitat mitigation banking, carbon sequestration, hunting leases, and water quantity or nutrient trading within a watershed, which could include the ideas of water impoundments and a regional water quality compliance permit. Layering should also permit income and applicable tax credits from cash crops – for example, cattle grazing (in dry periods), shrimp farming, and growing algae for biofuel. (Algae can be harvested every two to three weeks, making it a good source of revenue. Growing algae to produce green energy could make a landowner eligible for energy tax credits.) Another potential value is to allow those engaged in water storage to obtain longer-term consumptive water-use permits, as provided for in changes to section F.S. 373.236 (6)(a). Those changes allow water management districts to grant consumptive water use permits for a project for up to 50 years in specified instances that benefit the public good.

Everglades Restoration Certification Program – In this concept, those participating in restoration programs through storing additional water would receive certification as a partner in Everglades Restoration that would entitle them to the streamlining or waiving of certain regulatory requirements. A value would result from a simplified and efficient process to participate in such a program.

Another set of comments focused on landowners' need for predictability when it comes to regulations and payments for storing additional water.

Regulatory predictability –Landowners engaging in storing water need to know that the rules, such as standards for water quality, will not change at some mid-point. One way to address those concerns is the use of a Safe Harbor provision, something that the USFWS allows in order to provide private landowners with assurances that they will not be penalized by endangered species laws when they manage their land to conserve listed species. In the case of landowners storing water on their land, a safe harbor provision would most likely need to apply to several regulatory programs at the state and federal levels.

Revenue Certainty – Landowners need reasonable certainty that the revenue they are owed for storing water and other related ecosystem services will be available once they invest in transforming their lands for this purpose. Those concerns could be addressed by requiring that the government agency contracting for the ecological services establish a trust fund to ensure that payments are made. Sustained funding will also be essential so that water storage programs are supported for a period long enough to demonstrate whether the strategies are working.

Information Needs

Participants listed a number of topics requiring information. Those topics include:

- The market value of the service of storing water.
- How long a landowner can store water before phosphorous levels become unacceptable (a topic that FRESP is evaluating). Allowing cattle to graze is one way to remove some of the phosphorous. Another way to reduce phosphorous build-up is to not allow a wetland to dry out, and if it does, to slowly re-hydrate it.
- How new federal water quality standards will, over the long term, impact current Best Management Practices requirements.
- How easements related to water storage would work and the relation of those easements to other conservation easements (for wetland restoration, for example).
- How much phosphorous comes from urban areas and uses such as golf courses. Agriculture is often blamed for high phosphorous levels when it is the urban uses that contribute the higher levels. A one-acre home site, a forum participant observed, produces four to five times more phosphorous than agricultural uses.
- How the Internal Revenue Service (IRS) will treat income from wetland restoration. It is possible that the income would be treated as a real property sale, which means that a landowner could engage in a Section 1031 “like-kind” exchange under the IRS code.

Making Participation Easier and More Appealing – Next Steps

An overall next step, forum participants agreed, is to convert the complex issues and strategies related to water management to something that is easy to understand. “If we do not understand the problem and what we are approving (or disapproving) we will get something we don’t want,” a landowner participant observed.

In order to develop a program that will work for landowners – and with which ranchers will want to be involved – the agricultural community needs to be an active participant in the conversation. That conversation should involve an ongoing dialogue between landowners and other stakeholders and should seek participation of and advice from the larger ranching community about how to best promote restoration of the Kissimmee – Lake Okeechobee – Everglades ecosystem.

Next steps could be organized around near-, middle-, and longer-term actions:

Near-Term – As discussed in more detail above under Potential Issues and Strategies, near-term actions should include simplifying and reducing the upfront costs of entry (i.e., make participation in a water management program easy, not a burden). Those actions should also include obtaining the data needed to demonstrate the cost effectiveness of removing phosphorous and meeting restoration goals by retaining water on the land.

Middle-Term – Provide statutory protection from liability in the case of storing water. Establishing some type of water control utility district could be a way to address concerns about liability. The district approach could be customized to fit the specific needs of each area.

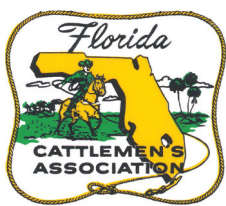
Longer-Term – Establish a one-stop water-storage program that is easy to understand and rewards participation by private landowners.

Closing Comments: A Commitment to Keep the Dialogue Going

Commissioner Bronson kicked off the closing discussion with a review of the potential new U.S. Environmental Protection Agency federal water quality standards that, if adopted, could have a significant impact on Florida agriculture. Those standards, Bronson noted, might require very costly technology that is not yet available. He asked forum participants to join with others in developing a reasonable plan that the state can advance. “That plan could include storing water as discussed today,” Bronson noted. “Science and practicality need to come together. Agriculture cannot do this alone. Public-private partnerships will be needed.”

As highlighted on the prior page, other forum speakers also stressed the importance of moving forward with strategies that will facilitate the practice of water storage in the Upper Kissimmee Basin. They also emphasized the importance of working through public-private partnerships as a way to stretch limited public funds through practical, more cost-effective water management practices that will enhance and sustain inland and coastal ecosystems and the business of agriculture.

In closing the forum, Keith Paglen thanked the Community Foundation for Palm Beach and Martin Counties for underwriting the forum and recognized other sponsors (named below). He also committed the continued involvement of ORCA including preparing and forwarding the results of the forum to participants as well as planning next steps. “We will stay engaged in the dialogue.” Paglen emphasized. “I’ve learned in my years in business that much can be accomplished with optimism and teamwork. Working together I am confident that we can find the seeds of the solution we seek.”



The September 30 “Just Add Water” forum was organized by the Ocean Research & Conservation Association (ORCA), a nonprofit organization dedicated to protection and restoration of marine ecosystems and the species they sustain through the development of innovative technologies and science-based conservation action. The forum was made possible through the generous support of the Community Foundation for Palm Beach and Martin Counties. Meeting coordination and additional funding were provided by TetraTechEC, Inc. Additional support was also provided by Dean, Mead Attorneys at Law. The venue was provided by the Florida Cattleman’s Association. For more information about the “Just Add Water” initiative, contact Lauren Guerrero at lguerrero@teamorca.org.

(The “Just Add Water” forum was facilitated by Rafael Montalvo, with the Florida Conflict Resolution Consortium. The forum report was prepared by Jean Scott, owner of the Boca Raton-based consulting firm, Strategies for Liveable Communities.)

Appendix A: The Economic-Regulatory Context

Highlights of Speaker Comments

Federal Programs (Jerry Joiner, Joiner Consulting): The primary source of funding for agricultural conservation/preservation now is the federal government, Joiner noted. Highlighted below are several of those programs that recognize the offsite benefit from services uniquely provided by agricultural lands and are administered by the U. S. Department of Agriculture's (USDA) Natural Resources Conservation Service include:

- **The Wetland Reserve Program** – pays up to 100 percent of the restoration costs (in the case of a permanent easement) for landowners who protect, restore, and enhance wetlands on their property. Some 60 Florida ranchers have enrolled approximately 200,000 acres in the program. A pilot is underway to allow participation without giving up grazing rights.
- **The Grassland Reserve Program** – provides annual payments via long-term rental agreements (10, 15, and 20 years) to landowners who voluntarily sell cropping and/or development rights under permanent easements. The goal of the program is to protect grasslands for livestock grazing and other uses from conversions to cropland and urban uses, and promote sustainable grazing practices.
- **The Farm and Ranch Lands Protection Program** – provides matching funds for up to 50 percent of the appraised fair market value of easements on qualified, privately-owned agricultural land. The remainder of the value is contributed through payments from the eligible entity and through donations of part of the easement value by landowners.

Just Add Water: Creative Approaches (Ernie Cox, Family Lands Remembered): Cox reviewed four local rural lands planning initiatives designed to conserve important natural resources:

- **Collier County's Rural Land Stewardship Area (RSLA)** – To date, the program has led to 50,000 acres of protected lands in Stewardship Sending Areas and 8,000 acres approved or in process in Stewardship Receiving Areas. Ave Maria University and the Town of Ave Maria is the first of the receiving areas. The county used the RSLA program, which covers a 195,000-acre area, to protect valued natural resources and ranchlands without using public funds for acquisition.
- **The Babcock Ranch Conservation Design Plan** –will result in 90 percent of the land in conservation and agricultural uses. Public funds were used to acquire 73,000 of the 91,000-acre ranch. Of the remaining 18,000 acres, 9,000 will be placed in conservation uses (trails, greenways, and restored wetlands) and 9,000 acres (less than 10 percent) of the ranch will be developed. That development will meet green design standards.
- **The St. Lucie County RSLA Overlay** – was designed to conserve 12,000 acres of Adams Ranch (the Stewardship Sending Areas) without the use of public funds for acquisition. The land would be protected through the transfer of stewardship credit to Stewardship Receiving Areas.
- **Hatchineba Lakes** – a 5,100-acre ranch in Polk County, which will be conserved through an innovative transaction with The Nature Conservancy (TNC). The landowner donated 1,100 acres to TNC, and sold an undivided tenant in common interest in 4,000 acres to TNC. The two parties are working together to establish a conservation bank for scrub jays and sand skinks, a wetland mitigation bank, and a gopher tortoise recipient site.

Appendix A: The Economic-Regulatory Context

Highlights of Speaker Comments (continued)

Cox also highlighted a number of other conservation programs, including:

- **USFWS Safe Harbor Program** – a conservation tool designed to provide private landowners with assurances that they will not be penalized by endangered species laws when they manage their land to conserve listed species. Private landowners can voluntarily develop their own Safe Harbor agreements.
- **FFWC Cooperative Conservation Blueprint (CCB)** – When complete, the CCB will consist of a fully unified set of GIS data layers of priority statewide natural land and water resource areas, working landscapes and conservation areas, and a complementary package of recommended landowner incentives that make conserving their lands financially valuable by providing real dollar value for supplying services that the public needs (water storage, for example) and other public benefits.

Business and Tax Issues Associated with Water Restoration Projects (Michael Minton, Dean, Mead, Minton and Zwemer): The use of transfer of fee and less than fee title to state and federal agencies, licenses and leases, and water control districts in water restoration projects were the primary focus of Minton's comments.

- **Transfer of Fee and Less than Fee Title** – can be used in water restoration projects to sell or allow access to real property. Transfer in fee means the property owner transfers all interests (the whole bundle of sticks) in the property. Less than fee is when the property owner transfers certain rights to the buyer but continues to own and be able to use the land for specified purposes. Both methods constitute a sale of real property under the Internal Revenue Code (IRC). Under Section 1031 of the IRC, proceeds from the sale can be used to purchase property of like kind, although strict timing rules apply. When property is sold under threat of condemnation (Section 1033), the period of time to purchase replacement property is longer.
- **Licenses and Leases** – can be used to grant an agency the right to use and occupy a specified land for certain acts (for example, a water management district structure). In both cases, the income received by the landowner is taxed as ordinary income.
- **Water Control District** – could be used to make improvements and perform services related to water restoration. The advantages of that approach are the isolation of liabilities (a concern with water storage) and, if the district is a corporation, payments received for capital improvements may be exempt from income tax under Section 118 of the IRC. If the district is established as a not-for-profit corporation under Section 501 (c)(12) of the IRC, it could receive grants from governmental agencies to construct improvements on property (for example, pumps, irrigation, and drainage) or to exercise certain rights on the property (for example, store water or grant flowage easements). Annual payments to a non-profit to perform tax exempt functions would be exempt from taxes.

Other important issues to consider when designing a water restoration project are:

- **Valuation** – the process of determining through an appraisal the value of storing an acre foot of water and allowing access to and from and sometimes across the parcel (for example, if an abandoned citrus grove is converted to water storage).
- **Liability** – the potential adverse impacts of water storage on the remaining land and surrounding land. Those impacts could raise concerns about liability (for example, if a berm built to store water breaks) and aesthetics (if the water storage area is vacant during dry months, for example).

Appendix B: September 30 “Just Add Water” Forum Agenda

Wednesday, September 30, 2009 • 10AM - 3PM

Workshop Objectives

- Identify and explore promising strategies to promote landowner participation in Everglades and coastal ecosystems restoration.
- Identify specific next steps that can be taken by workshop organizers, participants, agencies and others to further develop or implement the most promising strategies.

Agenda

- 10:00AM Welcome – Keith Paglen, Ocean Research & Conservation Association (ORCA)
- Introductions – Kim Love, TetraTech EC
- Agenda Review – Rafael Montalvo, Facilitator, Florida Conflict Resolution Consortium (FCRC)
- Setting the Stage – Paul Millar, Martin County & the County Coalition
- Ecological Issues
- Impacts to Lake Okeechobee Watershed – Dr. Paul Gray, Florida Audubon
 - Impacts to the Indian River Lagoon – Dr. Edie Widder, ORCA
- Financial/Regulatory Concerns – Michael Minton, Dean, Mead Attorneys at Law, Ernie Cox, Family Lands Remembered, Jerry Joiner, Joiner Consulting
- Ecosystem Services and Markets – Dr. Len Shabman, Resources for the Future
- 12:15 PM Working Lunch
- 12:30 PM Facilitated Discussion – Rafael Montalvo, Facilitator, FCRC
- What strategies should be explored to encourage landowner participation in Everglades and coastal ecosystems restoration?
 - Which of these strategies are the most promising and why? Which should be the highest priorities and why?
 - What opportunities currently exist for implementing the most promising strategies?
 - Which of the opportunities (and/or next steps, as appropriate) should be the highest priorities?
- 2:15 PM Respondent Panel: Paul Millar, Paul Gray, Edie Widder, Michael Minton, Len Shabman, Jerry Joiner, Ernie Cox
- Concluding reflections: Commissioner Charles Bronson, Florida Department of Agriculture and Consumer Services
- Close and next steps – Jillian Vukusich, Community Foundation for Palm Beach and Martin Counties
- 3:00 PM Meeting Adjourns
- 3:00 – 4:00 PM Coffee and conversation (optional)

Appendix C: Forum Resource Speakers

Ernie Cox

Ernie Cox is President of Family Lands Remembered, LLC, which focuses on protecting Florida's environmental, cultural, and agricultural resources by using creative land planning and market-based incentive strategies. Previously, Ernie was the chair of Gunster Yoakley's Conservation, Stewardship and Rural Development group and served on the Rural Lands Subcommittee of the Committee for a Sustainable Treasure Coast. He received a B.A. degree in Economics, a B.S. degree in Geology, and law degree from the University of Florida.

Paul Gray

Paul Gray is the Science Coordinator for Audubon's Lake Okeechobee Watershed Program. He works primarily with multi-agency teams on regional environmental projects, including an emphasis on water and nutrient management initiatives. He holds a B.S. in Fisheries and Wildlife from the University of Missouri, an M.S. in Wildlife Management from Texas Tech University, and a Ph.D. in Conservation Biology from the University of Florida. He has been in the Okeechobee area for more than 20 years – as a graduate student from University of Florida, a biologist for the Florida Fish and Game Commission, and, over the past 14 years, for Audubon.

Michael D. Minton

Michael Minton practices in the area of federal income, estate, and gift tax law and family business succession planning. He has also developed a particular interest and special knowledge in agricultural and resource management law. Michael earned his masters in taxation law and undergraduate degrees from the University of Florida. He is President of Dean Mead's statewide operations.

Jerry Joiner

Jerry Joiner is president of Joiner Consulting, a firm he founded in 2004. Prior to that, Jerry served with the Natural Resources Conservation Service, first as a soil conservationist and later as assistant state conservationist for programs in Florida. He received a B.S. degree in Agriculture from Western Kentucky University.

Kimball Love

Kimball Love is the Renewable Energy/Sustainable Ecosystems Specialist with TetraTech EC, an environmental services consulting firm. She has over 20 years' experience in environmental project management, economic development, and outreach with a particular focus on projects that emphasize intergovernmental team building to address Florida's ecosystem restoration issues. Her positions prior to TetraTech include serving as the Division Director for Housing and Community Development for the Florida Department of Community Affairs, the Water Resource Manager for Martin County, and the Intergovernmental Representative for the South Florida Water Management District, where she coordinated the District's Agricultural Advisory Committee, led the effort that established the Okeechobee Utility Authority, and served on the Kissimmee River Restoration Project Management Team. Kimball has an MS in Geography from Florida State University and a MA in Educational Media from the University of Florida.

Appendix C: Forum Resource Speakers

Paul Millar

Paul Millar is the Water Resource Manager in Martin County's Office of Water Quality. His 33 years of water resource experience in South Florida include working for the South Florida Water Management District in a variety of capacities and serving as Director of Water Resources for the Loxahatchee River District. Paul represents Martin County on the South Florida Water Management District Water Resource Advisory Committee and serves as the staff liaison to the County Coalition for the Responsible Management of Lake Okeechobee. He received his B.S. degree in Biological Sciences from Cornell University.

Keith Paglen

Keith Paglen is Co-founder and CEO of the Ocean Research & Conservation Association (ORCA). Since its inception in 2005 as the world's first technology-based conservation organization, ORCA has grown from two individuals to a team of fifteen full and part-time professionals developing and applying the newest conservation technologies to better understand the devastating impact human society is having on coastal ecosystems while helping local communities solve those problems. Prior to joining the ocean conservation community, Keith spent more than 15 years as a marketing executive with Canon U.S.A., Inc., where he directed the company's environmental branding and philanthropic efforts. He is also the co-author of an article exploring the development of nonprofit performance measurements entitled, "The Metrics of Venture Philanthropy: An Analysis of Social Return on Investment and Financial Return on Investment." Keith received a B.S. in Business Administration from Saint John's University and is currently enrolled in the Masters program in Sustainability and Environmental Management at the Harvard University Extension School.

Leonard A. Shabman, Ph.D.

Len Shabman is a Resident Scholar in the Energy and Natural Resources division of Resources for the Future and serves as the Arthur Maass-Gilbert White visiting scholar at the Institute for Water Resources located in Fort Belvoir, Virginia. He is a member of the National Technical Review Committee for the Coastal Louisiana Restoration Program, the National Academy of Sciences, the National Research Council, and the Water Science and Technology Board. Len has also served on numerous academic committees, including the committee on the Restoration of Aquatic Ecosystems, USGS Water Research, Watershed Management, the Corps of Engineers Planning and Technical Review Procedures, and the Independent Review of the Everglades Restoration Program, and previously served as the Director of the Virginia Water Resources Research Center. He received his Ph.D. from Cornell University.

Edie Widder, Ph.D.

Dr. Edith "Edie" Widder is a biologist and deep-sea explorer with an expertise in oceanographic research and technological innovation. She is applying that expertise to reversing the worldwide trend of marine ecosystem degradation by spearheading the invention of new submersible instrumentation for coastal monitoring and equipment to enable unobtrusive deep-sea observations. In 2005, Edie resigned from her 16-year post at Harbor Branch Oceanographic Institution to co-found ORCA. In September of 2006, Edie was awarded a prestigious MacArthur Fellowship from the John D. and Catherine T. MacArthur Foundation based on her work with ORCA. She has a B.S. degree in Biology from Tufts University and a Masters degree in Biochemistry and a Ph.D. in Neurobiology from the University of California at Santa Barbara.

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