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South Florida water managers need to ease Miccosukee Tribe's concerns about U.S. Sugar deal

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07/16/2008
South Florida Sun-Sentinel

South Florida Sun-Sentinel

ISSUE: A potential hitch develops in the U.S. Sugar deal.

If anyone had doubts about the many complexities facing the state in acquiring U.S. Sugar landsto restore the Florida Everglades, it didn't take long for Dexter Lehtinen to bring a big one forward.

The former U.S. attorney, who has represented the Miccosukee Tribe for more than a decade, has weighed in with a legal challenge. Lehtinen and the Miccosukees are understandably concerned the $1 billion-plus deal will lead to the scuttling of a reservoir project in order to save money needed to pay for the 300 square miles of coveted property. The reservoir, the Miccosukees argue, is needed to stop polluted water flowing into tribal territory.

The state has spent roughly $250 million to build a 16,700-acre reservoir along U.S. 27. Last month, water managers stopped construction, although they arestill paying $1.9 million a month to idle contractors while a final decision is made as to whether the reservoir fits in with theU.S. Sugar purchase.

The Natural Resources Defense Council, an environmental watchdog group, has already gone to court to challenge the $800 million project to make sure that water from the reservoir will be used for Everglades restoration. That challenge didn't stop reservoir work, but the Miccosukee lawsuit could be more problematic.

The court challenge could tie up what began as a promising breakthrough in the ongoing effort to clean Florida's famed River of Grass. It's up to the South Florida Water Management District to make a compelling case in explaining how it plans to address the tribe's concerns without the reservoir.

Water managers can't take lightly the Miccosukee challenge, which is now pending before a federal judge. The state still has the daunting task of convincing a skeptical public that the purchase is not only worth its $1.75 billion price tag but also that it's needed, perhaps even at the expense of an already started project.

Failing that, South Florida may be left with another debilitating legal process that will drain enthusiasm and potential resources away from a deserving project.

BOTTOM LINE: Water managers must assuage the Miccosukee Tribe's concerns.

Birds could be sweet relief for Clewiston

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07/16/2008
News-Press

By Byron Stout -News-Press

While environmentalists have cheered themselves hoarse over the plan to buy out U.S. Sugar's holdings of 185,000 acres in the northern Everglades, some Clewiston residents are worried about their one-horse town. With Big Sugar, 1,800 jobs also will be leaving.

Not to worry. If Clewiston plays its cards right, it soon will be a city for the birds. Make that the city for the birds. The Everglades is a good place to see wading birds. According to the South Florida Water Management District, which is scrambling to redesign the Glades fix-up that once was called the Restudy, which morphed into the Comprehensive Everglades Restoration Plan, which soon will be Son of CERP, the Everglades is home to 'tens of thousands' of wading birds. Sadly, that's only maybe 10 percent of the historic abundance. At one time, millions upon millions of wading birds inhabited the area between Lake Okeechobee and Florida Bay. We're talking great and snowy egrets that turned cloudless skies white as they left their roosts at dawn. White ibis that blanketed the sawgrass prairies like snow, and roseate spoonbills whose nesting supercolonies made sunsets eternal in the treelines of the Ten Thousand Islands.

If those great systems are restored to even 30 percent of their former grandeur, as the World Wildlife Fund says is possible, South Florida once again will be the greatest wonder of the birding world. That is a world that includes not only 46 million U. S. birders who generate an astounding $85 billion in total economic output. It includes tourists from the dank British Isles, eco-hungry Germans, technologically supreme Japanese, and feathered friendlies from every other corner of the planet.

Birders are the perfect demographic for Clewiston tourism. They are educated and wealthy, and, like everyone else, they love warm destinations in winter, when Florida birds are most abundant.

The redesigned Everglades will not be the natural system of old, but it may be better for birding. Tens of thousands of acres of Stormwater Treatment Areas - the man-made marshes in which aquatic plants suck harmful nutrients from runoff - are magnets for waterfowl. That is waterfowl, as in the most-watched type of bird by 78 percent of away-from-home birders.

The STAs not only are good for birds. They are the best bird-watching places ever - highly engineered cells with fine roads atop encircling dikes from which busloads of birders can perfectly peer through exquisitely crafted lenses.

Those birders will want not only buggy and airboat rides, but wine with dinner, a concierge for side trips, access to the Internet, and no doubt a fleet of fishing guides. For the Big O once again will be the biggest and best of warm-water fisheries - frenetic with famed Florida-strain largemouths, and brimming with bream and crappie.

And unlike those jobs dependent on sugar and the disappearing muck in which it's grown, the new eco-jobs will be sustainable, for as long as the River of Grass is restored. God willing, forever.

Editorial: Don't dump other water projects

07/16/2008
News-Press

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News-Press

Just because the state is buying out U.S. Sugar doesn't mean water management projects should go by the wayside.

The report last week that the South Florida Water Management District might dump the plan to build the C43 reservoir is disturbing.

The reservoir was going to be created to help store and purify excess water from Lake Okeechobee for storage and to ensure that nutrient-laden water didn't spoil our Caloosahatchee River - as we've seen in the past.

The price tag is $500 million.

The explanation is that the recent $1.75 billion deal to buy 187,000 acres south of Lake O for Everglades restoration could eat up that budget.

Plus, the federal government is not doing its part to pay for its promised share of the bill.

The feds are a 50-50 partner, and they should pony up.

We repeat, the U.S. Sugar buyout does not eliminate the need to continue important efforts to improve our water quality.

This is for the good of our environment, our economy and our quality of life.

And our members of Congress, especially our own district representative Connie Mack, R-Fort Myers, should fight harder to make the federal government live up to its commitment.

Western Communities: New nature and biking trail opens today near refuge
07/16/2008
South Florida Sun-Sentinel

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South Florida Sun-Sentinel

Water managers are expected to open a nature and biking trail at a storm water treatment area beside the Loxahatchee National Wildlife Refuge at 9 a.m. today.

A 3-mile trail for hiking, biking and bird watching stretches along the top of the levee that surrounds the 6,562-acre, manmade filter marsh that cleans pollutants from storm water headed to the refuge.

The recreation facilities include a 200-foot boardwalk with a gazebo that reaches over the water. There is also a parking lot and information kiosk that explains how the treatment area works and what wildlife can be found on the former farmland. It was turned into wetlands by the South Florida Water Management District.

The recreation area is at Stormwater Treatment Area 1 West on County Road 880, south of Southern Boulevard.

Carol Saunders: Jupiter man wins Leukemia & Lymphoma Society Man of Year

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07/16/2008
Stuart News

Stuart News

Andrew Wieseneck and Susan Guilbert were named 2008 Man & Woman of the Year for the Leukemia & Lymphoma Society. The "Grand Finale" took place at the Cohen Pavilion of the Kravis Center June 6.

There was a crowd of more than 200 friends and supporters on hand to hear the exciting announcement — the results of an intense 10-week contest to benefit the Leukemia & Lymphoma Society's "Man and Woman of the Year campaign that pitted seven business and professional candidates against each other to see who could raise the most money.

A Jupiter native, Andrew Wieseneck, an attorney in the Private Wealth Services Department of Gunster, Yoakley & Stewart, PA was the celebrated 2008 Man of the Year, raising over more than $54,000, which earned him 54,646 votes. Taking the title of 2008 Woman of the Year was Susan Guilbert of Verizon Wireless, with a total of $14,244.

"The candidates were judged solely on philanthropy or their success in generating funds for The Leukemia & Lymphoma Society," says Wieseneck, a graduate of Jupiter High School, the University of Florida and Nova Southeastern University. "Every dollar raised counted as one vote and the male and female candidate with the most votes accumulated was crowned the winner."

Pictures of each winner and the company they work for, are currently gracing a number of busses around the county, and will run for at least three months and possibly six, thanks to Lamar Advertising.

"We'll both be entered in the running for National Man and Woman of the Year," says said Wieseneck, by phone from his law office. "And we are recognized in a national ad in 'USA Today.' plus being interviewed on WPBF Channel 25 right after the Grand Finale party. That night, we each received a beautiful Tiffany plate with our name engraved on it."

In this annual competition that began with a Kick-off Party April 1, the seven candidates raised more than $145,000 for The LLS. They were Marybeth Bochel of The Gift Basket Café, Karen Counes of the South Florida Water Management District, Kelly Herrmann of Regions Bank, Nitasha Kadam of KaBloom, Daniel Kotok of Dale and Thomas Popcorn, Guilbert and Wieseneck.

On hand to meet the guests and congratulate winners at the Grand Finale were honorary chairpersons JP Hervis and Kristin Hoke, morning anchors of WPBF News Channel 25 and Event Co-Chairwoman Dr. Melissa Singer, the 2007 National Woman of the Year and Cara Catalfumo, the 2007 Runner-up National Woman of the Year.

This year's candidates were raising funds in honor of the 2008 Boy of the Year, Jarod Malnik and the 2008 Girl of the Year, Daisy Healey, who attended the event with their families.

Wieseneck held a series of events over the 10-week contest, working hard to unite the community in his fundraising efforts with a cocktail reception at ClearView Galleries in Palm Beach Gardens, a bachelor/bachelorette auction at Roxy's Bar in downtown West Palm Beach, a concert at the Square Grouper in Jupiter, a celebrity bartending event at Amici restaurant in Palm Beach and a happy hour at City Oyster in Delray Beach.

He also sent out a number of personal request letters to friends and business associates, asking for donations.

"I was dedicating my campaign to honor my grandfather, Arthur Yeckes, who passed away in 1993 from large cell lymphoma," Wieseneck said. "I was very excited about being nominated for this event and felt it was a fantastic opportunity to make a difference in the lives of the families in our community affected by leukemia, lymphoma and blood cancers."

Prize packages for the winners, provided by the event's presenting sponsor Palm Beach Illustrated, included two weekend getaways courtesy of The Abaco Club on Winding Bay.

Other sponsors were Lexus of Palm Beach, ESPN 760 AM, WPBF Channel 25, KOOL 105.5 and Lamar Advertising.

For more information, call Darby Collins at (561) 775-9954.

Easter Seals'

'Seal the Deal'

More than 200 guests participated in the Easter Seals "Seal the

Deal" shopping event June 28 at Worth Avenue's designer boutiques and specialty stores, along with a "Starlebrity Bartending" pre-party June 5 at The Chesterfield's Leopard Lounge. All proceeds benefit preschool-aged children with disabilities at Easter Seals Igoe-Amar Child Development Center.

"Seal the Deal" offered guests a day of shopping with extra deals, entertainment, refreshments and two prize drawings of gifts from stores along the Avenue.

Approximately 43 stores and merchant members participated in the event.

"We thank the Worth Avenue Association and all the volunteers for their hard work to make this day a success," said Rhonda Clinton, executive director for Easter Seals Palm Beach, Martin and St. Lucie counties. "The services and therapies we offer at our Center are critical for the children we serve and we are grateful for everyone who came out to support our children!"

For more information, contact the center at (561) 471-1688 or log onto www.fl.easterseals.com.

Send items to Carol Saunders at

CarolChatter@aol.com or call (561) 746-5280.

Proposed higher tax rate in Martin could cost you $52 more per year

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07/16/2008
Jupiter Courier
George Andreassi

George Andreassi-Stuart News

STUART A shrinking tax base prompted County Administrator Duncan Ballantyne to propose a higher property tax rate for 2009 on Tuesday that would cost the typical homeowner an extra $52.

Boosting the Martin County property tax rate to $7.264 per $1,000 of assessed value could make up for a $4.4 million shortfall in the 2009 budget as a result of the $2 billion drop in the tax base, Ballantyne said.

The proposal would result in a county property tax bill of $1,663 for the owner of a median value home of $229,000.

None of the county commissioners expressed support for a bigger increase in the property tax rate going into a week of budget workshops starting Monday. Nor did any of the commissioners say they wanted to cut $4.4 million from the proposed $363.7 million budget.

When he initially released the 2009 budget on July 3, Ballantyne proposed a property tax rate of $7.036 per $1,000 of assessed value, which would have meant a property tax bill of $1,611 for

the typical homeowner.

The current property tax rate is $6.834 per $1,000 of assessed value, which would yield a tax bill of $1,565.

While they did not make any decision on raising the property tax rate or cutting the proposed budget, the commissioners offered differing opinions on whether the commissioners and administrators should take a pay cut.

Commissioner Michael DiTerlizzi, a Republican candidate for the open state House seat in District 81, said he suggested voluntary 10 percent pay cuts for the commissioners and administrators based on a survey distributed to 6,000 residents in Palm City and Jensen Beach that brought in 600 responses.

'One of the issues in my budget survey was a lot of people felt administration has to take some cuts,'DiTerlizzi said. 'I wouldn't recommend dramatic cuts but an ... adjustment backwards of 10 percent is not a dramatic cut for anybody. We need to show the residents we are really serious.'

A 10 percent cut for the county commissioners and top 20 paid county managers could save Martin County about $280,000.

The state Legislature and the Stuart City Commission volunteered to take a pay cut in recognition of the declining economy, DiTerlizzi said.

Commissioner Lee Weberman agreed.

'There's no real cuts to management; there's no shared adversity,' Weberman said. 'We need to show the rest of the employees we're serious.'

But Commissioner Susan Valliere said she did not want to demoralize the county's top brass when they are working so hard to cut their budgets, while providing the services residents want.

'I want to chime in right now about the concept of cutting the pay of employees: I will not support that,' Valliere said. 'I value all of our employees.'

Valliere suggested commissioners save $625,000 by cutting their district funds of $125,000 each.

IN OTHER BUSINESS

The Martin County Commission took the following actions:

Adopted a resolution urging the South Florida Water Management District and the U.S. Army Corps of Engineers to speed up buying land and completing construction on the Indian River Lagoon South project.

Approved a rate increase for Lifestar helicopter ambulance service that will raise the bill of a typical patient to $12,598, a hike of $1,416, or 12 percent more than the current rate. The increase is needed to help cover rising fuel costs.

Agreed to continue trucking of solid waste to the Palm Beach County landfill, instead of the Okeechobee County Landfill, for 90 days to determine if Martin County can save money. The new

arrangement has been in effect for 60 days.

Decided to advertise a proposed change to the county's noise ordinance that would prohibit entertainment venues from allowing noise to be audible more than 150 feet beyond its property boundary.

Approved a $10 million bond deal that will allow Martin Memorial Medical Center to lease medical equipment.

Approved the rezoning of a .643-acre residential lot at the northeast corner of U.S. 1 and Oleander Street in Hobe Sound to allow commercial uses.

Approved the rezoning of a 1.82-acre residential lot on the northeast corner of Dixie Highway and Silvia Avenue in Rio to allow commercial uses.

Approved the rezoning of the 492-acre Shadow Lake Groves property west of Florida's Turnpike and north of Martin Highway in Palm City Farms to allow industrial use.

Approved the rezoning of the 127-acre Shadow Lake Estates property west of Florida's Turnpike and north of Martin Highway in Palm City Farms to allow 5-acre ranchettes.

Asked county officials to lay the ground work for leasing Building 30 at Witham Field to the Elliott Museum while the cultural institution builds new facilities on Hutchinson Island in 2009 and 2010.

Approved the rezoning of a 0.655-acre lot near the southwest corner of Kanner Highway and Salerno Road in South Stuart to allow the construction of an access road to a neighboring property.

Property tax rate comparison

Median home taxable value: $229,000

Current property tax rate: $6.834 per thousand dollars of assessed value

Property tax bill: $1,564.99

July 3 property tax rate proposal: $7.036

Property tax bill: $1,611.24

July 15 property tax rate proposal: $7.264

Property tax bill: $1,663.46

Most Marathon development stalled for now

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07/16/2008
Key West Citizen
Busweiler, Rob

By Rob Busweiler -Free Press

The tales of failed developments in the Keys are told almost daily, thanks in part to the property value slump that has affected the entire country.

After the City of Marathon incorporated in 1999, a flurry of redevelopments took place. Projects like the Tranquility Bay Resort and Coral Lagoon dramatically changed what was already on the ground. In 2005, the second wave of redevelopment plans started up, led by a 199 unit condo/hotel destination resort slated to be built on Knights Key, and the 84 unit Marlin Bay Yacht Club and Marina project.

Maranu

Dubbed Maranu, the project for Knights Key was started by a company called EarthMark. After more than a year of wrangling over a development agreement with the city, the project got the green light in 2006. And then, nothing happened.

More than two years after the city council voted to approve the project, Knights Key looks as it did 10 years ago. The big field that was slated to be the center of the resort is lined with recreational travel trailers — a far cry from the pools, marina and restaurants originally planned for the property.

The slowdown in development has changed the game in the Keys. When the market was hot, projects were pushed toward completion. Now it appears the developers are content to wait.

Marlin Bay

As the EarthMark project sits in the prebuilding phase, another major development further north on U.S. 1 stopped midway. The Marlin Bay Yacht Club project recently finished phase one of its construction, with several brand new buildings and a marina overlooking the Gulf of Mexico. Due to a lack of funds, all work has been stopped.

Raymond Gottlieb, a spokesman for the project's developer L.M. Sandler & Sons, said its lender, Bank United, like other banks, is having difficulty raising "liquidity" to provide funding for the development.

Affordable housing

While the city could certainly use the increased tax revenue from the projects, what Marathon is really hoping to recover is the 30

affordable housing allocations the Knights Key development is currently holding onto. As part of the project's development agreement, 30 affordable housing units were expected to be built on the resort grounds for employee housing. The request falls in line with the city council's goal of requiring new large-scale development to build affordable housing as part of the project, and, at the time, Marathon had a glut of affordable allocations to give away.

With the passage of a transfer of building rights ordinance, those allocations are now in high demand. The TBR ordinance allows property owners to sell off development rights if they deed their current unit as affordable. The line for affordable housing allocations is now nearly 100 deep, and the 30 being held onto by EarthMark could go a long way toward relieving that list. Marathon Planning Director George Garrett said he has been in talks with the developers about an extension of the development order, plans for a sewage treatment plant and getting the affordable units back in the city's hands for the time being. Representatives from EarthMark did not return calls for comment as of press time.

"It doesn't get them off the hook [for building affordable units]," Garrett said. "But we will take them for now."

Faro Blanco

A market rate project with loads of history is also slated to be redeveloped. The Faro Blanco project, which consists of property on both the ocean and gulf sides of Marathon, is aiming to restore the resort to its once famous status. Representatives from the project's developer, the Spottswood Companies, did not return calls for comment. Garrett says he believes the city will be hearing from the company shortly, however.

"I would expect to see something coming from them in the not-too-distant future," he said, adding that the redevelopment of the project's marina and dock slips appears to be first in line.

104th Street

"A lot of people are just holding on to see what happens," said Debbie Swift of Old Town Key West Developments. "The mortgage market affects everyone."

Swift and her father, Ed Swift, are heading up a project that includes building 40 affordable owner occupied homes. That project got the benefit of free land from the City of Marathon on 104th Street to help increase the local affordable housing stock. According to Swift, she expects the project to be moving into the permitting stage, with construction beginning as early as 6 months from now.

Sea Grape

Another affordable housing project in Marathon is also making progress after years of delays. The Sea Grape affordable housing project, which will see 80 affordable rental units put on the ground, recently cleared a permit hurdle with the South Florida Water Management District. Like Swift, the Sea Grape Project also

got some help from the government via Monroe County. The County earlier this year agreed to buy the land, which sits next to the Wooden Spoon restaurant, and lease it back to the developers.

"Sea Grape is cruising," Garrett said of their progress working through City Hall.

As it comes

Redevelopment has long been a contentious issue in Marathon, especially when a project like Marlin Bay displaces residents living in a trailer park on the proposed construction site. Most will agree, however, that something is better than nothing, which is why the high end developers from EarthMark have kept allowing recreational travel trailers to rent space on Knights Key.

"EarthMark are looking for a little bit of flexibility," Garrett said. "And the market is determining most of that."

The market will continue to determine what is built and what remains stalled in the foreseeable future. In the mean time, the city will prepare for economic recovery and chug along with the few much-needed affordable housing projects.

rbusweiler@keysnews.com

Investing more than hope

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07/15/2008
TimesDaily

Derrick Jackson -TimesDaily

Commentary: Hirsche said that half of the 548 refuges do not have a single biologist.

Even as they praise the purchase of nearly 300 square miles of sugar-industry land by the state of Florida, environmentalists wonder whether this attempt to save Everglades National Park by restoring its water flow will translate into concern for wetlands in general.'I think people have an understanding of what the Everglades is because it is a national park,' said Laurie Wunder, a biologist at Lake Umbagog National Wildlife Refuge in New Hampshire and Maine. 'The wildlife refuge system essentially performs similar functions, but refuges are not as recognized in the public eye. I'm not sure if it will translate into that kind of recognition.'Desiree Sorenson-Groves, vice president of government affairs for the National Wildlife Refuge Association, said, 'Wildlife refuges are small on the landscape, even though in total size (nearly 100 million acres), they have more land than national parks (84 million acres). They are like postage stamps compared to parks.'They are not iconic like Yellowstone and the Grand Tetons and their majestic views. They are usually low in altitude but high in biodiversity. They contain all the habitat, and

they are where the animals go. Because they are so small, they have lots of pressures on them, such as encroaching development. But because they are not as dramatic, they often end up as a stepchild.'In May, the Cooperative Alliance for Refuge Enhancement, a coalition of 22 groups ranging from the NWRA, the Nature Conservancy, and the Audubon Society to hunting groups and the National Rifle Association, detailed in a report to Congress that the underfunded system is deteriorating. The report said the system, currently receiving $434 million a year for operating funds, needs $765 million a year. With budget cuts eliminating 300 jobs in recent years, the operations and maintenance backlog has grown to $3.5 billion. The coalition says 2.3 million acres are being overrun with invasive plant species and the refuges have only about a quarter of the law enforcement needed to protect them and their visitors.

In June, a House appropriations subcommittee proposed a raise in refuge operations to $469 million. Subcommittee chairman Norm Dicks, a Democrat from Washington state, said, 'These refuges have been desperately understaffed, with almost 200 of our wildlife refuges having no staff at all to protect the wildlife and serve the visitors.'Environmentalists are grateful for any extra few million, but in Capitol Hill testimony last fall, NWRA president Evan Hirsche detailed needs that demand many more resources. Hirsche said that half of the 548 refuges do not have a single biologist, which runs contrary to the 1997 Refuge Improvement Act, where Congress said the Secretary of the Interior shall 'ensure that the biological integrity, diversity, and environmental health of the system are maintained for the benefit of present and future generations of Americans.' Hirsche said there was no active habitat management or wildlife surveys in the refuges along the Potomac River and that nationally, volunteers now do 20 percent of the work in the system.'The refuge manager explains that he is 'hoping for the best,' for the eagles, herons, and hundreds of bird species' along the Potomac, Hirsche said. 'Hoping for the best can't be what the architects of the Refuge Improvement Act had intended.'Hoping for the best will not be good enough in the long run, with wetlands from the Everglades to Umbagog to precious prairie potholes (for migratory waterfowl) likely to be among the first places to feel the effects of global warming. Umbagog, with the help of the Trust for Public Land, is in the middle of a several-year effort to expand the refuge, currently at 21,647 acres, to nearly 70,000 acres, partially to include adjoining upland forests.'People are becoming aware that having land to complement refuges is important, but it's also hard to put the priority up there against things like healthcare that play an urgent part in society,' said Rodger Krussman of the trust. There's never enough money for conservation.' Sorenson-Groves added, 'If we could, we could add another 100 million acres.'Derrick Jackson writes for The Boston Globe.

Seawater Desalination in North America

07/15/2008
Underground Infrastructure Management

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Back on Track with Tampa Bays Seawater Desalination Success

Christine A. Owen, Efrain Rodriquez and Andrew L. Shea - Underground Infrastructure Management

Despite the continuing demand for new sources of potable water in North America, new seawater desalination project development has been slow in the United States pending the successful completion of the remediated Tampa Bay Seawater Desalination Facility. The plant was completed in November 2007 and is currently producing a sustainable and continuous 25 million gallons per day (mgd), the plants design capacity.

This article looks at the Tampa project in the context of the fast-track procurement, discusses current project operations within the Tampa Bay environmental setting, and establishes its role as the first large-scale seawater desalination facility in North America.

Many articles have been written on what went wrong with the development and implementation of the 25 mgd Tampa Bay Seawater Desalination project, but few articles have looked at what has been accomplished in the context of addressing the environmental drivers and regulatory compliance mandates that motivated Tampa Bay Water and its member governments to run the gauntlet of seawater desalination development. From the original 1990s state mandate to reduce groundwater withdrawals in the region to the more recent and persistent drought conditions in the Southeast, the new 25 mgd source of potable water was not incremental supply it became requisite supply to meet groundwater withdrawal reductions. During the early permitting phase in 1999, the public raised concerns regarding trading adverse impacts from groundwater use to the Tampa Bay estuary system from salinity impacts. Extensive ongoing monitoring is required of the project to ensure operations do not compromise the delicate balance of the local or regional environment.

Originally conceived as a design-build-own-operate-transfer (DBOOT) procurement project, the Tampa Bay plant is the first co-located seawater desalination plant with an existing coal fired power plant in the United States. The Tampa Bay project created a new paradigm for permitting and developing large-scale, seawater desalination plants in the nation. By accessing the power plants existing once-through cooling water system for the desal plants intake and concentrate discharge, the project avoided significant federal and state permitting delays associated with construction of conventional seawater intake and outfall facilities in the environmentally sensitive bay. As documented and successfully defended in a 1999/2000 legal challenge, the desal plants original developers, Poseidon Resources and Tampa Bay Water, demonstrated that the blending of 19 mgd of twice-concentrated seawater with approximate 1.4 billion gallons of bay water circulating through the Tampa Electric Co. Big Bend Power Station resulted in an almost undetectable impact in the water quality of the flow discharged back to the bay, allowing for the existing ecosystems to remain in a healthy state.

What have we learned in the processes used at this project?

Procurement Type This magazine does not have enough space to write a treatise on the merits or purported downside of the private sector own/operate model vs. design-bid-build, design-build or

design-build-operate methods for public-private partnership delivery of complex seawater desalination systems. Suffice it to say that all delivery mechanisms recognize that the public sector has ultimate control over the private sector, either through publicly scrutinized, legally binding contractual mechanisms or utility commission regulatory processes in the case of investor-owned utilities. The decision by Tampa Bay Water to exercise its rights in the pay-for-performance contract to convert from a DBOOT contract with the private sector to a DBO contract (also with the private sector) is a testament to the strength and flexibility of these contracting methods. This contractual robustness also includes the remediation phase which similarly used the DBO contracting method for the successful fast-track delivery of essential water services.

Technical Issues Out of the sand box thinking: One of the serious challenges Tampa Bay Water and its remediation contractor faced during the remediation phase of the project in 2004 was the rehabilitation of the existing sand media pre-treatment system. After an expedited solicitation and piloting phase involving domestic and international design-build and operating teams, Tampa Bay Water selected the joint venture team of American WaterPridesa (now a joint venture between American Water and Acciona Agua) to resolve the pretreatment challenges and make the facility more operationally robust, given the highly turbid and variable salinity conditions in the bay source water, while still adhering to the strict product water and operating parameters. After consideration of overall project cost, the critical delivery schedule, the site constraints and the limited membrane vendor guarantees available at that time, AWP decided to modify the dual stage sand filters to a single stage roughing filter and install additional pretreatment systems prior to the sand filters (screens, coagulation, flocculation, settlement) and a polishing filtration stage after the sand filters (diatomaceous earth (DE) pre-coat system) to achieve the requisite seawater performance parameters of which silt density index was paramount, while protecting the 5 micron filters and reverse osmosis units from fouling (see accompanying schematic diagram). While DE has been used in Europe for pre-treatment and elsewhere for wastewater treatment, this novel process approach designed by AWP and implemented by engineer-of-record Hatch Mott MacDonald created a polishing step after the sand filters, and prior to the membrane separation desalination processes.

Permitting No impact on Tampa Bay marine environment: Since the full-scale commissioning, acceptance testing and start of operations in 2007, the facility has produced 6 billion gallons of potable water for the Tampa Bay region. With the dilution of the twice concentrated seawater at the powerplant, the facility has been able to achieve its environmental objectives while adhering to strict permitting and compliance requirements.

Why is the Tampa Bay seawater desalination facility significant?

Many critics of the desalination process have faulted both the technology and procurement process since the projects inception in 1995. While there have been several mis-steps and perfect storms of economic circumstances in the post-911 construction market, the Tampa Bay project demonstrates that using appropriate knowledge, expertise and technology can successfully result in potable water sources being obtained from the sea, that

the private sector can perform and that the environment can be properly protected.

Is desal water too expensive?

Desal water is typically not the cheapest source of water, mainly due to its dependency on high power consumption; however, adequate design and planning can make it efficient so that resources are used efficiently to manage consumption and equipment efficiencies and implement energy recovery systems. For this reason, all measures need to be taken to fully value water to send the proper pricing signal so that water users to conserve. The same must be said for the need for sensible evaluation of all water sources alternatives including re-use, conservation and desalination. When all reasonable alternatives have been exhausted or conventional systems are degrading the environment through inter-basin transfers or excessive pumping of groundwater and when drought conditions simply do not allow any other option, communities need to look to their brackish and seawater desalination options for the next increment of water.

How that next increment of water is amortized within the system can be evaluated as the marginal cost pricing of a scarce resource, if implemented properly. The goal should be to have the option available to the sponsoring communities: produce desal water when you need it, and conserve power when you dont.

As the project approaches its first year of full operation, we need to recognize Tampa Bay Waters commitment to serve its constituents and the private sectors ability to deliver complex process infrastructure with a balance of risk allocation and sharing.

Global perspective the whole world is watching

The Tampa Bay seawater desalination story is significant in many more ways than just the communitys ability to turn on the tap.

The Tampa Bay success has restored confidence in seawater desalination as a bona fide alterative water resource. Moreover, Tampa Bay Waters desal experience confirms that good environment is good business, a best practice that will be sustainable well into the future.

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The Next Market Crunch: Water

07/15/2008
Miller-McCune
Peter Friederici

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Peter Friederici - Miller-McCune

It's common practice to use business or banking metaphors when discussing the human use of water; in both cases, the central idea is to exert control, to manage. In its natural state, after all, water tends to be as unpredictable as booms and busts. It arrives as rain or snow, melts, runs into streams or seeps into the ground, floods, evaporates. Through enormous effort and expense, people have been able to corral that irregularity into something that can be relied on, mostly. You assume that your kitchen faucet will run whether or not it has rained recently, just as you expect you can tap into your savings during a recession. Farmers in California's Imperial Valley, where rainfall averages three inches a year and temperatures routinely exceed 100 degrees, have for a hundred years known that the irrigation water will run so they can plant and harvest the nation's winter salad crops.

What the managers who operate the water systems are doing is operating accounts. They're balancing income and expenses, doling out allowances, sometimes running a surplus, sometimes a deficit. And sometimes hiccups occur, just as they do in the financial system. In recent months, some of them have been pretty severe. Just consider a few scenes from the last year in water.

In Southern California, where most of the last 10 years have been drier than usual, water managers last year asked consumers in San Diego to cut back their water usage by 20 gallons a day. Some farmers, meanwhile, faced less-than-voluntary cuts. Due to a previous deal that had provided them with cheap water in exchange for agreeing to be the first to cut back in case of drought, many saw their water supply sliced by 30 percent on Jan. 1. As a result, many have fallowed fields, even cut back avocado trees, to ensure that they can grow some crops with the remaining 70 percent.

These events serve as reminders that, for all the recent hullabaloo about oil — its rising price, its environmental impact, its political volatility — it's not the only liquid likely to be fought over. Unlike oil, water's not a cause of recent climate change, and it isn't in any danger of being used up; indeed, it can be recycled ad infinitum. But there is still grave doubt about whether a warming world will have enough of it.

That can be hard to remember, given that climate change raises sea levels and is suspected of helping spawn monster storms like Hurricane Katrina that dump enormous amounts of rain in a short time. But salt water isn't potable, and a tropical storm is a blip in the overall cycling of regional climate. What worries hydrologists

and climatologists, instead, is the opposite extreme and the ways in which climate change is likely to dry up regions that are already thirsty.

Driven by a newfound sense of urgency, they're now trying to figure out how people could perhaps adapt to drier conditions with wiser use and a better understanding of how water moves through atmosphere, oceans and air. Though they're finding that there is a lot of fresh water out there, the most potent lesson they're learning is this: To stave off water crises in an age of climate change, humans are going to have to manage water, energy and ecosystems together in a system, undeveloped as yet, that takes into account their complex interconnection.

The small town of Orme, Tenn., ran out of water almost entirely last fall, forcing residents to emulate Third World residents in filling up any available containers during the few hours daily when the water was turned on. Low water levels fueled conflict between Georgia and its downstream neighbors, Alabama and Florida, about how much water to release from Lake Lanier, a crucial part of Atlanta's water supply. Georgia lawmakers have even tried to change the state's border with Tennessee to take in part of the Tennessee River, which flows tantalizingly just out of reach of the state, apparently as a result of a surveyor's error made almost two centuries ago.

That's a comic opera compared to the serious conflicts over water that are taking place on a regular basis in other parts of the world. Control over the vital aquifer that underlies the West Bank has been a consistent source of friction between Israelis and Palestinians. Ir aq and Syria have expressed concerns over how much water Turkey extracts from the watersheds of the Tigris and Euphrates rivers, which are vital to their water supply. In 2001, ethnic conflicts and civil unrest shook Pakistan as a result of drought-caused water shortages. Recent food riots in Haiti, Indonesia and other countries have been blamed in part on severe drought that has dramatically curtailed rice production.

Worldwide, one of every five people lacks regular access to safe drinking water, and the United Nations warns that that figure could grow to one in every three by 2025. Against this backdrop, it's easy to conclude that fights over water supplies may soon eclipse those over other resources, even oil.

"There's a growing risk of conflict over water, and it's not just the typical state-versus-state conflict where major rivers cross international borders," says Peter Gleick, president of Pacific Institute, an Oakland, Calif.-based think tank that has extensively studied water shortages. "It's going to be farmers versus farmers, farmers versus cities." He points to Tibet's ample supplies of fresh water as a factor in China's interest in the region — a prize, though, whose value may decline as climate change melts its glaciers and dries up the rivers they feed.

All these ups and downs might be explained as the usual give-and-take of weather playing out against a backdrop of increasing human population. In some parts of northern Australia, after all, drought gave way to floods in recent months as heavy rains arrived. Much of the western and northern United States enjoyed ample rain and snow last winter; snowpacks were far above average in Colorado, raising fears of flooding in many towns.

Global warming naysayers are fond of such anecdotes. To climatologists, though, such events are transient blips. Like a good day during a bear market, they have little to do with long-term trends — trends that are, from the perspective of those concerned about water supplies, alarming.

Many scientists have been attempting to refine general models of global climate change — which conclude that the planet is getting warmer as a result of greenhouse-gas emissions — into models that predict what the results of that warming are likely to be in particular regions. In recent years, a consensus has arisen out of this work, and it holds that the Mediterranean, southern Africa and much of the Middle East are among the regions likely to end up holding the short end of the stick when it comes to water supplies.

Another is the American West, especially the Southwest.

"The places that are water-stressed are the places that tend to be pushed into a drier state," says Chris Milly, a Princeton, N.J.-based research hydrologist with the U.S. Geological Survey. "Global warming is apparently affecting the overall circulation of the atmosphere, including patterns that govern where deserts form."

That's generally not because of decreases in rainfall; in fact, a number of regional models project that overall precipitation in the Colorado River basin is likely to remain about the same. Rather, it's because increased temperatures change the way water moves. More heat means quicker evaporation from rivers, reservoirs and wet soils. In the West, where much high-elevation precipitation has historically fallen as snow, higher temperatures also mean a change in the balance between snow and rain. The former runs off slowly, the latter more quickly. In a warmer world, the same amount of water falling from the sky may result in less water lingering to nourish people, animals or crops.

"With warming temperatures, we're quite likely in many parts of the West to see a shift from snow to rain," says Sam Earman, a hydrologist at the Desert Research Institute in Reno, Nev. "That could have a big impact on streams."

The most dire of recent studies, released in February, suggests that Lake Mead, the giant Colorado River reservoir that nourishes Las Vegas and much of central Arizona, could become unusable by 2021. The study, by Tim Barnett and David Pierce of the Scripps Institution of Oceanography, predicts that even a moderate warming trend could leave the Colorado River basin — which serves as a major water source for seven Southwestern states — much drier than it was during most of the 20th century.

"This water problem is not a scientific abstraction," Barnett says, "but rather one that will impact each and every one of us who live in the Southwest."

Though dry locales are likely to bear the heaviest burden, the American Southwest and other arid climes are by no means the only places that will have to contend with uncertain water supplies. In February, Milly and other hydrologists and climatologists published a paper in the journal Science claiming that, as the paper's title put it, "Stationarity Is Dead." By

stationarity, the authors meant the notion that climate was once broadly reliable. Over the last century, as nations and municipalities intensively developed water supplies, the people charged with water management could readily predict long-term averages for a particular region. Sure, there were dry years and wet, hot spells and cold, but over decades it was possible to chart averages to assess roughly how much water would be available in particular areas. Reservoirs could store the runoff from wet years, making it available during drier periods. That fueled the growth of Phoenix, Las Vegas and the farming mecca of the Imperial Valley, as well as developments in many other regions that face irregular precipitation.

Now, though, the paper's authors claim, climate change will cause — or has perhaps already caused — significant changes to the water cycle. As a result, predicting what supplies will be available in the future now requires a warning akin to the standard investor's warning: Past performance is no guarantee of future results. The lack of a track record presents a big challenge to engineers who have to figure out how to get sufficient and consistent water supplies to cities, towns and farms, especially when human populations and water needs keep growing.

"Historically, an engineer has to tell you how big a dam you need, so he looks at the data for the last 50 years and figures out what size dam has a 99 percent probability of being big enough," Milly says. "He can't do that anymore because the old record isn't representative of the future anymore. It's kind of a daunting task: How do we take the information that we're beginning to see about climate change and its effects on the water cycle and put it to an engineer working for a given township?

"A lot of people in responding to climate change are kind of going to be flying by the seat of their pants."

U.S. residents get their drinking water from an aging welter of pipelines, canals and reservoirs, many of them subject to leaks and outright failure because they're a century or more old. Simply carrying out needed repairs on that network is projected to cost $250 billion over the next couple of decades, according to the American Water Works Association. Worldwide, maintaining and expanding humanity's freshwater infrastructure is estimated to cost more than $500 billion a year. What happens if a good part of that investment is rendered superfluous by a changing climate — if, say, runoff from the Sierra Nevada or the Tibetan Plateau doesn't arrive to fill all those expensive reservoirs and canals?

Politicians and water managers have been responding to the double whammy of greater unpredictability and greater need with a number of strategies, not excluding divine intervention; last fall, Georgia Gov. Sonny Perdue convened an hourlong session outside the state capitol to "pray up a storm." More cold-eyed, there is the old engineer's strategy: If you're not sure something is going to work, make it beefier. If runoff is going to become more unpredictable, build higher dams and bigger reservoirs to get you through longer drought periods.

That's being tried in some places. California officials want to increase the size of a number of dams that store Sierra Nevada runoff. A proposed pipeline in Utah would carry Colorado River water from Lake Powell to fast-growing cities and towns in the southwestern part of the state. Planners in north Georgia are

considering converting old reservoirs built to prevent the flooding of agricultural lands into sources of drinking water.

There are a couple of problems associated with these old-school solutions, though, and not just that developing new sources of water these days, when all the best sources have already been taken, lends water agencies the faintly desperate air of a commuter reaching between the cushions, looking for quarters at the tollbooth. One problem is expense. The plan to convert Georgia reservoirs is projected to cost $100 million per lake; the Lake Powell pipeline, more than $800 million. Another is that new or larger dams provoke a lot of resistance from environmentalists and others who don't want to see such projects built. And a third is that in an era of climate change, there's simply no guarantee that such projects will have water to fill them.

"If runoff in the Colorado decreases a bit, it doesn't matter how big your reservoirs are," Gleick says. "They could be the size of bathtubs or as big as Lake Mead. They eventually run out of water."

Fine, some engineers say. If all the good freshwater sources are taken, let's look at some supply of water that hardly anyone thought of using until recently because it's too salty or too polluted. With modern reverse-osmosis technology, it's possible to purify just about any water source. That's how the U.S. military provides fresh water for troops in Iraq.

It's also what El Paso, Texas, does; last year, the city opened what is believed to be the world's largest desalination plant that isn't alongside an ocean. The Kay Bailey Hutchison Desalination Plant has the capacity to produce more than 25 million gallons of drinking water a day from brackish groundwater that was previously considered unusable. A couple of North Carolina counties rich in brackish water have begun constructing similar, though smaller, plants. Water engineers in other arid regions, such as Australia and the Middle East, have also embraced desalination in a big way.

But it's unlikely to be a panacea. Running a desalination plant produces a lot of extremely salty brine that needs to be discarded somewhere. A plant running on ocean water kills aquatic animals caught in the intake pipes. Perhaps worst of all, desalination takes energy. In an era when the greenhouse-gas emissions fossil fuels produce are getting intense scrutiny, the energy cost of water treatment may outweigh the benefits of using otherwise untapped sources.

Kathy Jacobs directs the Arizona Water Institute, a university consortium that works toward sustainable use of the state's waters, and she points out that it takes so much energy to deliver and treat water that these two sorts of infrastructure issues can't be assessed in isolation from one another. "Water and energy are essentially the same thing," she says. "It requires so much energy to move water, and it requires so much water to create energy, that they are essentially the same resource."

Another source of low-quality water flows right under your nose any time you drive by a sewage treatment plant. Historically, most observers have placed the emphasis on the first syllable in the word "wastewater," but that's changing. The same reverse-osmosis technology that can squeeze salts of out water can

squeeze out pathogens and contaminants; in fact, it's probably the best way to remove the pharmaceuticals and other synthetic contaminants that have been making headlines recently because of their persistence in many water sources.

A number of communities, especially in California, have begun injecting treated wastewater back into aquifers for later withdrawal through wells. Some are even planning to treat wastewater intensively and put it directly into the drinking water supply. But many potential users don't like the idea of such programs, some of which have been derisively labeled "toilet-to-tap," even in such water-stressed communities as Tucson, Ariz., and San Diego.

"Technology is a crucial part of future water management," says Brent Haddad, director of the Center for Integrated Water Research at the University of California, Santa Cruz. "But the trouble is that the technology is way out in front of the social science, policy and regulation. The disgust response isn't irrational, but it stands in the way of making good decisions about water management."

That will change, Haddad suggests, as local water crises and costs mount. He says that deliberate reuse of wastewater — as opposed to the sort of inadvertent reuse that takes place when a city dumps its wastewater into a river or lake from which other users take their water — is rising at about 15 percent a year in the U.S.

Conservation, too, is growing, but it remains an elusive goal, in large part because water remains very cheap in most communities in the United States. A Pacific Institute study of Las Vegas' water use recently concluded that the city could cut its Colorado River withdrawals by 10 percent by implementing simple conservation measures. But the Southern Nevada Water Authority is planning a $2 billion pipeline system to import groundwater from eastern Nevada to the growing city. At a time when Las Vegas has the money and political clout to ship water from elsewhere, there's simply not that much incentive to conserve.

"The technology exists to do all the things we want with less water," Gleick says, "but no one is doing it entirely right because the pressure isn't there."

Given this uncertainty, it's no surprise that some managers might be tempted to look down — into the ground, that is, which has been one of the greatest and most reliable sources of water in places where rainfall is irregular.

There's something like 20 times as much fresh water stored below ground as exists in all the world's lakes, rivers and streams. A lot of it is hard to get to, but historically that groundwater has made agriculture and development possible in regions where precipitation and rivers can't be relied on, including the Great Plains, the inland West and northern China. Whether it's a lonesome ranch windmill filling a single stock tank or a series of giant pumps quenching the thirst of half a million people — as was the case in Tucson until recently — groundwater has often been viewed as the capital that doesn't diminish, a conservative investment that will pay dividends even in the lean years.

That's an understandable view. Groundwater doesn't evaporate, so its behavior isn't going to change as temperatures increase.

And it is buffered from short-term changes in weather patterns; in most places, well levels are roughly the same whether it has rained in the last week or not. As a result, it's no surprise that some observers think that heavier use of groundwater may help some regions weather climate change. The National Ground Water Association said as much in a position statement issued last year: "Groundwater, the nation's subsurface reservoir, will be relied on more in the future to help balance the larger swings in precipitation and associated increased demands caused by heat and drought."

Yet the research the Desert Research Institute's Earman conducted to earn his Ph.D. at the New Mexico Institute of Mining and Technology makes him doubt how reliable groundwater will be in the face of climate change. He wanted to know how much of the groundwater at four sites in the basin-and-range country of Arizona and New Mexico originated as snow. To do that, he took advantage of an arcane fact: Snow and rain are composed of water with different proportions of hydrogen and oxygen isotopes. He knew that between a quarter and a half of the average annual precipitation fell as snow at his study sites, yet the chemical signatures of the groundwater showed that between 40 and 70 percent of it originated as snow. Snow, it turned out, plays a disproportionately important role in feeding those aquifers.

"The snowpack is like a bank account," Earman says. "Even though a single snowstorm won't produce more water than a single rainfall, it adds up in the snowpack into an account that could be made up of snow from 10 to 20 storms. That makes it a much more efficient agent of groundwater recharge than rain."

As a result, he says, a large-scale shift from snow to rain could cause large decreases in the recharge of aquifers — which would mean that wells have to be drilled deeper and could cause springs and streams to go dry. There are ample examples across the West where excessive groundwater pumping has caused entire rivers to dry up; Earman points to the Republican River in Kansas, where agricultural wells caused a decline of only 3 to 5 percent in groundwater storage — and a 50 percent decline in the river's flow.

"Western groundwater," says Mike Dettinger, a hydrologist with the U.S. Geological Survey who collaborated with Earman, "may in fact be very vulnerable to global warming in ways that no one really thought about before."

Historically, hydrologists have spent a lot more time studying what comes out of the ground than what goes in. They know a lot about how pumping can lower water tables and dry up surface waters and a lot less about how precipitation migrates into the ground. Earman and Dettinger are advocates for a national monitoring network that would meet that need by measuring recharge rates, but it is not in place yet and would not yield any data for quite a while.

A bill that's been introduced in the Senate, the SECURE Water Act, calls for just such a network. SECURE stands for a mouthful: Science and Engineering to Comprehensively Understand and Responsibly Enhance. But the extent to which comprehensive understanding of groundwater flows would responsibly enhance management strategies is highly uncertain. In most states, streams and groundwater are like a longtime unmarried couple:

They're profoundly linked, yet the legal system doesn't necessarily recognize a formal connection between them. And the laws governing water use are a confusing amalgam of federal, state, tribal and local regulations and legal rulings. Altering the existing system to reflect new scientific findings, no matter how trenchant, is a daunting task.

"Once you have a huge amount of economic infrastructure based on a particular interpretation, making massive institutional changes becomes very difficult," says the Arizona Water Institute's Jacobs. "To the extent that changes in groundwater management would affect existing water rights, there would be legal challenges, and the effort would be unlikely to survive."

Jacobs worked for the Arizona Department of Water Resources from 1980 through 2000, when the agency implemented a progressive water policy that designates so-called Active Management Areas in the state. In those, municipalities and private developers have to prove that new construction — and the new water uses it brings — will not impinge on the sustainability of groundwater supplies; management debates in one AMA have even explicitly acknowledged links between groundwater and surface water. Jacobs is proud of that accomplishment yet recognizes that if stationarity is dead, even a progressive policy may not suffice.

"In the case of the AMAs, we built into the system a likelihood of failure," she says, "because we predicted inflows that are higher than what they're likely to be in the future. We assumed the hydrology is constant. Our water management system can simply no longer be based on assumptions that came out of the past."

One of the most detailed of recent studies involving a region's water balance is being carried out along the San Pedro River in southeast Arizona. Using spidery, solar-powered sensors that look like something NASA would send to Mars, researchers from the University of Arizona and other institutions are measuring with great precision how riparian vegetation uses groundwater.

The San Pedro isn't much to look at as a river, but it supports a stately gallery forest of cottonwood trees that attract birds that, in turn, make this one of the most popular birding destinations in the U.S. It's also connected to a lot of groundwater in an aquifer that is the sole source of the water used by the fast-growing city of Sierra Vista, Ariz., the Army's Fort Huachuca and many other human users. As a result, the river is stressed; in 2005, a previously perennial stretch dried up for the first time.

The results of the University of Arizona monitoring project have quantified what scientists had suspected for a long time: namely, that the locally abundant mesquite trees use a lot of water. Mesquites have deep, deep taproots, wells in miniature that can provide them with water even during severe drought, thereby lending them an edge over such competitors as grasses. And they've been spreading — because of changes in wildfire regimes, livestock grazing or climate change or because woody plants are generally benefited by higher levels of atmospheric carbon dioxide. No one's entirely sure why.

Mesquite trees enrich the soil under them, and they furnish good wildlife food and habitat, but in an era of climate change, another service they provide may prove to be more important: They're

long-lived and effective at sequestering carbon. If residents of the arid Southwest decide to get serious about doing what they can to limit concentrations of carbon dioxide in the atmosphere, encouraging the growth of mesquite trees wouldn't be a bad way to go.

Except for this rub: A mesquite woodland uses a lot of groundwater — more than twice as much as the grasslands that are native to the same terrain.

"We could manage these ecosystems to be very productive, but then they lose a lot of water," says Travis Huxman, the University of Arizona hydrologist in charge of the project.

At a time when a growing human population is placing more demands on the San Pedro, dedicating more water to plant growth might be a tough sell. What's going to be more important, regulating the atmosphere or stretching water supplies?

Here's the final equation to consider, then, in the complex calculations required to manage water supplies: Society's water balance — and, for that matter, nature's — can't be assessed in isolation from its carbon budget. That's why Huxman, who also directs research at the University of Arizona's Biosphere 2 facility, has been working with ecologists and hydrologists to design experiments there to better understand plant-groundwater dynamics. And that's why almost any hydrologist you talk to these days is apt to stress how important it is for water managers to talk to climate scientists, and vice versa. Only through a holistic lens, they say, is there any chance of finding sustainable ways to live with both a changing climate and unpredictable water supplies.

"The problem is that people have been looking at issues sequentially," Jacobs says. "At least when you start looking at them together you can figure out how to manage both. For example, you can try to optimize both water supply and carbon sequestration. It's better than trying to manage them as separate problems."

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Marcus and Jamason square off in Juno Beach

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07/16/2008
Jupiter Courier
Bradshaw, Kit

By Kit Bradshaw- Stuart News

Incumbent District 1 Palm Beach County Commissioner Karen Marcus and challenger John Jamason, who works for the county in the public affairs office, went toe to toe on Tuesday night to a packed audience at Juno Beach Town Hall.

Marcus cited the work done in North County to preserve natural areas, provide parks and bring in Scripps and Max Planck, while Jamason hammered at the county commission to "thin out the bureaucracy" in the county.

"One of the first things I wanted to do when I came into office originally was to buy all the beachfront property possible," said Marcus. "And since then, we have had several community projects, and we worked with the municipalities to create them, such as the Juno Beach Pier and keeping baseball in the county by bringing it to Abacoa.

"These are all wonderful things," Jamason, a Jupiter Farms resident said, "but we need to make cuts to non-essential items. A lot of things are nice to have but not necessary."

This theme of money—how it should saved, spent, taxed and used ran through the questions from the audience that were presented by moderator Roger Buckwalter-- and the two candidates had differing views on the ways that the county could and should make ends meet in challenging budgetary times.

"Next year, we will be looking at buyouts for many of the long time employees in the county, " said Marcus. "But there are many expenses that are mandated by the State Legislature, such as funding Tri-Rail and passing down a lot of requirements, such as paying for the touchscreen voting machines that we are not now using."

Marcus admitted that the county had to sit down with the boating constituency to discuss ways to generate more funds, perhaps with a permit fee rather than the now defunct ramp fee, but Jamason opposed any additional fees, pointing out that "boaters have already paid for the ramps with ad valorem taxes and grant money." He added that rather than looking to raise fees that the county needed to cut more spending.

"The Sheriff's Office should be on the same purchasing system as the county," he said, "and we need to look at the people within the county government This means that we could be cutting some of my co-workers. It is unfortunate, but we have to grin and bear it."

The two candidates, who will be decided upon during the Aug. 26 primary election drew a bigger line in the sand when it came to the purchase of U. S. Sugar.

"I am pleased that this occurred," said Marcus. "This is a way to have a flow-way between the southern part of Lake Okeechobee to the Everglades, and provide a new natural area. We will be working with the residents of the Glades—the governor has mandated this—to create a sustainable economy."

But Jamason opposed the purchase of the U. S. Sugar property in

the Everglades Agricultural Area.

"I think in theory it is good, but it is bad to take this property off the tax rolls-- $5 million will be taken off. I would like to see the state use this money they will be paying to buy U.S. Sugar for education and the courts. And don't forget that the Fanjul family is still involved and they'll get their money for their land."

Center to give visitors different look at Everglades

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07/16/2008
Palm Beach Post - South Palm Beach County Bureau
Haase, Linda

By LINDA HAASE-Palm Beach Post

Visitors to the Arthur R. Marshall Loxahatchee National Wildlife Refuge know they'll usually see a different facet of Mother Nature on each trip.

But visitors to the 143,000-acre facility soon will have a chance to see the refuge from another vantage point.

The new visitor center at the Arthur R. Marshall Loxahatchee National Wildlife Refuge soon will have $750,000 worth of high-tech, interactive exhibits. 'It will be a marvelous educational tool for all ages, ' said Nancy Marshall, president of the Arthur R. Marshall Foundation, which supports the refuge. About 300,000 people visit the refuge annually.

The new 12,000-square-foot, two-story visitor center includes a 40-seat auditorium, gift store and staff offices. But by the end of the year, the center, on U.S. 441 south of Boynton Beach Boulevard, will house $750,000 worth of high-tech, interactive exhibits that will offer a behind-the-scenes look at the Everglades.

"It has been the best-kept secret in our county, a refuge for animals, and a beautiful respite for humans. Going forward, it will include a host of educational exhibits, interactive displays and video shows all pertaining to the Everglades," said Nancy Marshall, president of the Arthur R. Marshall Foundation, which was instrumental in raising the money for the exhibits.

The 11 exhibits include a simulated airboat ride, a gator hole and a challenge to visitors to manage the refuge.

"I know of no other destination in Palm Beach County where visitors will be able to experience the many facets of the Everglades in one location," Marshall said. "It will be a marvelous educational tool for all ages, besides being entertaining and interactive for youngsters."

Having displays that teach visitors to respect and enjoy the fragile ecosystem is essential, officials say.

"The refuge is high on the Marshall Foundation's priority list

because it is the last remaining portion of the northern Everglades, and it's right here in Palm Beach County," said Marshall.

The refuge also will be offering new programs soon, including night walks, more lectures, podcasts and geocaching, which is a treasure hunt using a GPS, said David Underwood, the refuge's public-use team leader.

For now, he said, the staff is enjoying its new quarters, which were enhanced by Marshall Foundation interns who landscaped and installed pavers and a butterfly garden.

"At the present time the refuge is visited by about 300,000 people annually. We expect that number to increase to about 500,000 when the visitor center is completed. These were anticipated figures before Gov. Crist's bold initiative which, among its many benefits, is sure to increase awareness and spur additional visitors to the refuge to learn more about the Everglades," Marshall said.

The center is open from 9 a.m. to 4 p.m. daily. For information, visit www.fws.gov/loxahatchee.

Editorial: Pay good public servants well

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07/16/2008
News-Press

News-Press

Good help doesn't come inexpensively.

When you start talking about managing multimillion- and billion-dollar budgets, you definitely don't want management on the cheap.

Our local taxing authorities need to pay professional staff well, so as to make the positions competitive with the private sector and encourage a culture of excellence and incentive.

So, Sanibel spending $750,000 on top positions really isn't shocking.

We are in an era of a tax revolt where citizens have expressed anger over bloated local government budgets fueled by the years of the real estate boom.

They want to see lower property taxes and fees, after all.

Certainly, local governments must make necessary adjustments, but demands for a slash-and-burn policy are unreasonable.

Yet elected officials on these city councils, commissions and boards have a duty to ensure that public servants are held accountable and are performing the services required by taxpayers.

Public servants and their boards are first and foremost accountable to the public.

They must be accessible to the public.

They must ensure the public understands what the consequences of higher and lower budgets are for services.

State skeptical of Callery plans

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07/16/2008
Palm Beach Post
Quinlan, Paul

By PAUL QUINLAN-Palm Beach Post

WEST PALM BEACH — Plans to develop nearly 3,000 homes at Callery-Judge Grove met a slew of objections from the state Department of Community Affairs this week.

Chief among them: Plans to turn the orange grove into a 3,756-acre residential and equestrian community run afoul of the same state law that the grove's developers authored and pushed to speed the project's approval, state planners said.

And plans for the grove, which lies in the middle of The Acreage, lack open space, would create urban sprawl and would overburden roads and schools, they said.

The state's scathing evaluation comes one month before county commissioners are set to vote on the plan as a series of amendments to the county's blueprint for growth, which the department then would either approve or deny.

The report does not bode well for the plan, which has been scaled down over the years from an earlier proposal to develop 10,000 homes.

"It raises a lot of objections," said Lorenzo Aghemo, county planning director.

Among other objections, the Department of Community Affairs cited discrepancies with Florida's "agricultural enclave" law. That measure, which Callery-Judge championed, allows owners of farmland to build densities equal to that of surrounding property.

The department said the enclave law specifies that the parcel to be developed cannot exceed 1,280 acres unless the surrounding land has an authorized density of 1,000 residents or greater per square mile.

The law does not specify how far out a property owner may sweep when measuring surrounding densities. Callery-Judge applied a 5-mile radius in its plans, which would allow an agricultural enclave of up to 4,480 acres.

But the state agency said the developer may measure only 1 mile

out, which would result in a density well under the 1,000-resident threshold.

"It's not defined," said Jon Peck, spokesman for the agency. "So it comes down to a question of interpretation. And in our judgment, 5 miles goes well beyond the perimeter of the property."

Callery-Judge General Manager Nat Roberts was confident that the objections could be resolved, saying that he had yet to sit down with his attorneys and planners to evaluate the state report.

"We'll figure out how to fix what we need to fix," he said.

But Roberts said his own analyses found sufficient surrounding densities within a 1-mile radius of the grove to justify the existing plans.

The state's report went on to criticize the development for failing to prove that adequate roads, drinkable water and waste-water facilities would exist to support nearly 3,000 homes.

Roberts said Callery-Judge has struck deals with the county to provide those services.

County commissioners are set to vote Aug. 21 on whether to resubmit the proposal to the state agency.

Orlando budget crisis could mean tax hike

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Orlando Sentinel
Schlueb, Mark

Mark Schlueb | Sentinel Staff Writer

Socked by state-mandated tax cuts and a tough economy, Orlando's leaders will likely raise property taxes and make deep cuts in services to close a $30.million city budget shortfall.

Mayor Buddy Dyer's top staff presented the grim financial news to the City Council on Monday, rattling off a long list of possible cuts that could affect everything from residents' safety to how often the grass is mowed and potholes are filled. Orlando is among the first Central Florida cities to face raising taxes and slashing services, but it won't be the last. Across the state, cities and counties are struggling with the tax-slashing impact of Amendment.1, which voters approved in January.

Possible cuts in Orlando run the gamut from fewer cops on the street to cutting the number of children in after-school programs and shuttering some community centers on Saturdays.

"Oh, my God. That's just awful," Commissioner Patty Sheehan said. "This isn't fat. This is nuts and bolts of our government. We can't cut these things." But that may be the reaction Dyer was hoping for. At a workshop today, commissioners plan to decide

whether to raise taxes to save some of those services. While Dyer stopped short of explicitly calling for a tax increase, he also said he would not cut public-safety spending. He said the only way keep that pledge is to raise taxes.

Commissioners will discuss a possible tax increase today and set next year's maximum property-tax rate Monday.

The final decision won't come until after public hearings in September.

Under state law, a small tax increase can be approved by a simple majority of four of the seven members of the council. But bigger increases would require the approval of a supermajority of five commissioners or even a unanimous vote. If approved, it would be the first time that Orlando's tax rate has gone up in 19 years.

The city's accountants laid most of the blame on Amendment.1, the constitutional amendment backed by Gov. Charlie Crist, Republicans in the Legislature and voters that forced cuts in property-tax collections. Property taxes are the main source of cash that keeps cities, counties and school districts running.

But additional sources of money that Orlando and other cities depend on also have dropped, the result of a slackening economy. Sales-tax collections are expected to be down 7.6.percent. Money doled out to cities by the state is projected to fall by 4.5.percent; user-fee collections in departments such as parks and planning will see a 6.percent decline. And with business growth slow, occupational-license fees are flat.

The city's general-fund budget, which finances most operations, is $341.million this year. Adding in increases in salaries, fuel costs, health-care expenses and public-safety programs, the city would need $374.9.million to provide the same services next year. That's $30.million more than the city is expected to have. Dyer's administration already plans hiring delays and a series of relatively small cuts that city officials say would save $12.million. But that would still leave $18.4.million to be slashed or offset by a tax increase.

Some cuts would go to the heart of Orlando's nickname of The City Beautiful. There could be fewer flowers in parks and roadside flower beds, parks and medians would be mowed less often and maintenance-heavy brick streets would go without repairs.

Dyer inherited a $23.million deficit when he took office in 2003 and cut 256 positions to balance the budget. He said the city has been tightfisted with tax dollars ever since and has already made all the cuts that could be done without much impact.

While the number of police and firefighters has increased, the rest of the city work force has decreased during over the past decade. In 1998, there were 17.7 city workers for every 1,000 city residents. Today there are 14.5 workers.

"It's not small, somewhat painless cuts anymore," Chief Financial Officer Rebecca Sutton said. "To get the numbers we're talking about, it's going to take big cuts."

Where the pain might be felt

Orlando officials Monday identified possible cuts that could make

up more than half of the budget gap, including:

$3 million: Delay the hiring of 25 new cops $8.8 million: Freeze wages $2.9 million: Eliminate 2 EMT rescue trucks and a fire engine $900,000: Put police mounted patrol out to pasture $100,000: Close some community centers on Saturdays $200,000: Reduce after-school programs and trash collection at parks $60,000: Close museum on weekdays and eliminate plant purchases at Leu Gardens $200,000: Reduce or eliminate brick-street rehab SOURCE: City of Orlando

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Property-tax bills likely to rise in Orlando

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Orlando Sentinel
Schlueb, Mark

Mark Schlueb | Sentinel Staff Writer

Property-tax rates are likely heading up in Orlando, city commissioners said Tuesday as they worked to plug a $30 million budget gap.

Members of the Orlando City Council haven't decided exactly how high they'll raise the rate to make up for Amendment 1, a tax-slashing package approved by voters in January. But the new levy under consideration would mean the average homeowner in Orlando would see little, if any, savings from the amendment.

Though they took no formal vote Tuesday, a majority of the council said it favors a rate of $5.9787, compared with the current rate of $4.9307. That's a 21 percent increase, but city commissioners insisted it's not as bad as it might seem.

Here's why: Under the current rate, the owner of a home with a $25,000 homestead exemption and an assessed value of $200,000 would pay about $863 in city taxes. Because of Amendment 1, the homestead exemption doubles to $50,000 next year, reducing the impact of the proposed higher tax rate. So the owner of the same home would pay about $897 under the higher rate, an increase of $34.

Yet, if commissioners left the tax rate unchanged, the same homeowner would pay about $740.

Commissioners said they favor that rate because, for the average homeowner, the extra homestead exemption would largely cancel out the higher tax rate. Homes with an assessed value less than the average $168,000 would still see a modest tax savings, city officials said.

Even those with pricier homes wouldn't see a big increase, commissioners argued.

"We're not bleeding people here," Commissioner Patty Sheehan said. "If you have a $400,000 home, you're talking a couple [of] lattes a month."

Mayor Buddy Dyer and commissioners say they must either raise taxes or slash vital services such as police and fire protection. That's something they're not willing to do, even though the city hasn't raised property taxes in 19 years.

"[These are] tough decisions we are making here," Dyer said. "But we have a high-quality city and high-quality services. . . . I think we have to uphold the standards that residents have come to expect."

On Monday, commissioners were briefed on the financial condition of the city, which was hit hard by a slumping economy and cuts forced by Amendment 1. The Dyer administration laid out a long list of painful measures that included everything from delaying the hiring of more cops to letting the grass grow higher along city roads.

By Tuesday, commissioners were ready to embrace the alternative: a tax increase.

"I'm not willing to sacrifice any more the safety of my district," Commissioner Tony Ortiz said.

Still, with many household budgets facing their own cuts, the council's proposal is sure to face public opposition.

"It's a really bad time, with the economy the way it is, to impose an extra burden right when people need the extra cash," said Orlando native Edward Winslow, a student and restaurant worker. Winslow said his grandmother recently mortgaged her home, which had been paid off, to cover basic living expenses.

"I don't see why they don't throw out a program they don't really need," he said.

The tax increase isn't a done deal. Adopting the rate under discussion would require a supermajority of the council -- five of its seven members -- when a vote is taken Monday.

Even then, the rate won't be set in stone until after public hearings and final votes in September.

But cities and counties across Florida are now considering it as they struggle to deal with cuts imposed by the Legislature and Amendment 1.

Dyer called Orlando's financial straits a "state-imposed budget crisis."

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great 35 years -- and more to come

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07/16/2008
Orlando Sentinel
Healy, Jane

Jane E. Healy | Editorial Page Editor

In February 1973, a few days before I was set to leave Washington, D.C., for a reporting job at the Orlando Morning Sentinel, a story came across the wire: The Orlando Evening Star, the city's afternoon paper, had just printed its last edition. A curmudgeonly reporter in the Washington bureau of the New York Daily News, where I had been working as a "copy girl" for more than a year, thrust the story in front of me and questioned whether I was going into a precarious situation.

"Their afternoon newspaper is folding. Sure you want to go down there?"

Good thing I didn't flinch. That afternoon paper was merged with the morning paper and the name changed to the Sentinel-Star. Thirty-five years later, I have yet to regret my decision.

Not only did the Sentinel evolve into an outstanding newspaper, the Orlando area continued evolving as well, into an area with a strong economy and a population as interesting and diverse as anywhere in the country.

Indeed, that is what made it so much fun to be a writer for the Sentinel. Not only did I get to chase police stories in the 1970s that aren't a whole lot different from the police stories now -- all kind of weird (after all it's Florida). But I also was able to stay in Orlando and have the world come to me, as I served on the Editorial Board, interviewing everyone from Bill Clinton and Al Gore in the back of their campaign buses in 1992 (and, no, we didn't endorse them), to every Florida governor and U.S. senator since 1980 as well as U.S. Cabinet members and celebrities. Actress Meg Ryan was here a few years ago, pitching an anti-mercury campaign.

Today the Sentinel is evolving once again. Not only do we have a vibrant Internet site, we remade the paper last week into a more energetic and lively product that better matches today's Central Florida in all its diversity and interests. I led the changes on the opinion pages, fully believing that offering more voices on the pages, such as comments from our Web site, will make the content far more valuable and interesting to a wider range of readers.

The Sentinel made these changes in face of a challenging business climate for newspapers as revenues are siphoned off to the Internet. It does remind me a bit of the merging of our papers in 1973. That came at a time when afternoon papers across the country began closing or merging because people's habits had changed. They no longer were getting home early enough to read an afternoon paper. And few cities had enough advertising revenue to support multiple papers.

A similar shift is happening now -- people want to get their news in different ways -- and I am confident that the Sentinel's makeover will make it stronger for years to come.

So it is with mixed feelings that I have decided to retire from the Sentinel and my job as Editorial Page Editor. I have loved every single day I have come to work at the Sentinel but have concluded that it's time to slow down a bit. But it will only be a bit. While my last day as editorial page editor will be July 11, I will be writing a Sunday opinion column in this space starting Aug. 3. In it, I'll continue to hold public officials accountable. I'll try to point out hits as well as misses.

It will be a new chapter in my life at the Orlando Sentinel, with my first obligation, as always, to serve the reader.

Jane Healy won the Sentinel's first Pulitzer Prize in 1988 for her "Florida's Shame" series of editorials.

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