

Florida Specifier



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WMD agreement 6

The Suwannee River and St. Johns River water management districts have signed an agreement to mutually deal with water resource issues. They plan to work together in planning and permitting decisions, and to use shared science in setting minimum flows and levels for their water bodies.

Gulf task force report 7

The Gulf Coast Ecosystem Restoration Task Force released a preliminary report identifying three problem areas in need of attention following the Deep Horizon well blowout: preventing further loss of wetlands, reducing the flow of nutrients into the Gulf and enhancing resiliency among the coastal communities.

Biofuel plant 9

Highlands EnviroFuels of Sebring received two key permit approvals from the Florida Department of Environmental Protection. The company expects to have their few remaining permits approved by the end of 2011 so they can begin construction of a sugar-to-ethanol plant by the middle of 2012.

Water/wastewater academy 11

To help meet the impending need for water and wastewater plant personnel, Brevard County Public Schools established the Academy of Environmental Water Technology at Heritage High School in Palm Bay. AEWT is an innovative four-year career academy focused on environmental science and water resources technology.

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Got a story lead?

Got an idea for a story? Like to submit a column for consideration? Fire away. And don't forget to fill us in on your organization's new people and programs, projects and technologies—anything of interest to environmental professionals in the state. Send to P.O. Box 2175, Goldenrod, FL 32733. Call us at (407) 671-7777; fax us at (407) 671-7757, or email us at info@enviro-net.com.

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DEP, WMDs making progress with ERP streamlining

By ROY LAUGHLIN

Obtaining an environmental resource permit in Florida is, according to some, too slow and too complex.

An ERP is required for most construction and development projects. Delays in obtaining the permit can slow job growth, potentially drive away new business and slow the expansion of existing enterprises.

Officials at the Florida Department of Environmental Protection and the state's water management districts have been working on an overhaul of the permit application process since early this year. Their goal is to make the permit application process faster, less mysterious and more efficient.

The most far-ranging of their proposed changes will require legislative action during the next session. But DEP and the water management districts have already set in motion a number of administrative changes in anticipation of more substantial changes to follow.

"What we have today is a system of rules that we use to carry out our statutory requirements that were all created by different entities around the same time," said Jeff Littlejohn, PE, deputy secretary for regulatory programs at DEP.

The underlying laws dealing with

resource protection, water quality, flood management and resource allocation at the state level are the same for both DEP and water management district permit reviewers.

The fundamental problem is that each of the water management districts has, over the past two decades, implemented its own permitting procedures.

Moreover, in some instances there can be up to five different interpreta-

tions—one for each WMD—of the same rule.

Littlejohn explained that some of the desired changes can be made through administrative procedures.

Those changes, however, would need to start with each of the WMDs, "a considerable undertaking," as

STREAMLINING
Continued on Page 8



Photo by Elizabeth Crapo/NOAA

UCSB's Molly Redmond collects water samples for methane analysis aboard the NOAA ship Pisces in September, 2010. Her work is shedding light on hydrocarbon-degrading deep sea bacteria in the Gulf. See story on Page 7.

Everglades restoration hits fast track

By DAN MILLOTT

In late October, Stu Appelbaum, chief of planning and policy for the U.S. Army Corps of Engineers, told a group of state, federal, tribal and environmental leaders that past corps planning practices were overly detailed, too expensive and took too long to complete.

Appelbaum outlined the corp's new approach at a recent meeting of the South Florida Ecosystem Restoration Task Force in West Palm Beach.

Dawn Shirreffs, Everglades restoration program manager for the National Parks Conservation Association, said the original plan was approved in 2000. "Now 11 years out, we are under construction on all the projects that have been authorized by Congress."

She said groundbreaking for a new 12,000-acre reservoir in western Martin County to improve water in the St. Lucie Estuary and the southern portion of the Indian River Lagoon took place in early November.

Shirreffs noted that there are 68 projects involved in the restoration and "we had to figure out how to reduce turnaround time from six years to 18 months."

She said—and Appelbaum agrees—that the corps was trying to foresee any possible problems and that was slowing down progress with the work.

Appelbaum said that they are now looking at the third generation of Everglades restoration projects in the area south of Lake Okeechobee to Everglades National Park and Florida Bay. He noted that when he presented the corps' new approach to projects, it was widely endorsed.

The new approach is called the

Planning Process Transformation Pilot. Five corps projects around the country are now incorporated under this accelerated pilot process and two of them are in Florida—the Everglades Restoration being the largest. The other is Palm Beach Harbor.

One major focus of improving water flow into Everglades National Park is reworking a section of the Tamiami Trail in western Miami-Dade County that now blocks water flow.

To open that blockage, the restora-

tion calls for constructing 5.5 miles of elevated roadway. A one-mile section is now under construction and is due to be completed in 2013. The portion under construction starts about a mile west of Krome Avenue.

The other 4.5 miles will be built west of there, ending near an existing part of the road that was elevated in the 1960s.

GLADES
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The leadership transition continues...

SWFWMD, SJRWMD name new executive directors

By PRAKASH GANDHI

Guillory named to top post at Southwest district

Money is in short supply. Senior employees have been fired. And the economy is still struggling to gain a firm footing.



Guillory

"Meeting our core mission with a reduced budget is our goal," said Blake Guillory, PE, a 50-year-old engineer

GUILLORY
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Tanzler takes the reigns at St. Johns River district

Though his agency has been hit hard with severe cutbacks in manpower and funding, Hans Tanzler III remains fearless in the face of the challenges that lie ahead for him in his new role as executive director of the St. Johns River Water Management District.



Tanzler

"I believe that with the technology that exists, we can be more efficient than in the past with fewer people working here," Tanzler said in November. "We must leverage that technology

TANZLER
Continued on Page 16

EPA releases final health assessment for TCE to IRIS database

Staff report

The U.S. Environmental Protection Agency released its final health assessment for trichloroethylene in September. The assessment's information is included in the agency's Integrated Risk Information System.

EPA's risk assessment was complicated because TCE is characterized as both a carcinogen to human and a human non-cancer health hazard.

TCE is produced by natural processes in the environment, and in the past it has been anthropogenically synthesized and discarded in substantial quantities.

According to EPA, TCE is one of the most common man-made chemicals found in the environment. Because of its substantial volatility, the chlorinated solvent may move from contaminated groundwater and soil into overlying buildings, where human exposure occurs through inhalation.

The new health assessment addresses inhalation risk in particular. The EPA has already established drinking water standards for TCE, and standards and protocols for remediation efforts at federal Superfund sites.

The risk assessment provides policy-makers at all levels with access to the lat-

est scientific information to evaluate health risks arising from exposure to TCE present in soil, water or air. It also provides information useful for environmental cleanups and other efforts to reduce human exposure risk.

The process of producing a final health assessment for TCE began in 2006, when the National Academy of Sciences established a scientific consultation review committee.

Since then, the EPA's health assessment underwent several levels of peer review starting with agency review and ending with external peer review by the EPA's Science Advisory Board in January, 2011.

The IRIS database and information about TCE is available at <http://www.epa.gov/IRIS/>.

Support for EPA policies. Politicians at all levels blame government regulations—especially environmental regulations—for stifling economic growth and killing jobs.

But voters in some states are not buying into that blame game.

A recent poll conducted by Public

Policy Polling showed that the U.S. Environmental Protection Agency enjoys significant popular support among voters in nine of the nation's most populous states.

Nationwide, disapproval of the Obama administration's recent decision to rescind rules tightening smog standards for air was substantial: 70 percent of respondents disapproved, while 30 percent approved of the move.

The same poll found that by an even larger majority, Americans want the EPA to hold corporate polluters accountable for their emissions. Seventy-eight percent of the voters held this opinion, a substantially larger number than those disapproving the ozone decision.

The Obama administration explained its decision to retreat from new smog regulations as an attempt to protect and create jobs. Pollsters found that 69 percent of respondents agreed more with the opinion of health experts who proposed tighter smog reductions than with those who said the decision would protect jobs.

Not surprisingly, the same number of respondents explicitly supported stricter limits on toxic chemical emissions. They were also in favor of EPA establishing limits on carbon emissions at power plants and industrial facilities.

The pollsters noted that women, and particularly Latino women, formed a substantial opinion block within the general polling results. This is particularly true for support of stricter emission limits at the federal level.

The poll sampled 1,249 registered voters in Michigan, Ohio, Pennsylvania, California, Florida, Colorado, Nevada, New Mexico and Virginia. The organization conducted its poll Oct. 6-9.

The poll was conducted for the League of United Latin American Citizens, the League of Women Voters of the U.S. and the Natural Resources Defense Council.

Complete results are available at http://docs.nrdc.org/air/air_11101301.asp.

Integrated wastewater, stormwater planning. The EPA recently released new planning documents supporting an integrated approach to managing wastewater treatment plant and stormwater releases.

In many communities, older sewer systems still handle both wastewater and stormwater runoff. Stormwater runoff accumulates pollutants and debris from urban surfaces. If excess or debris-laden stormwater causes sewer overflow in these combined systems, then pathogens, nutrients and other pollutants may spread

contamination over a wide area.

The EPA's new advice will identify efficiencies where more than one water quality issue can be addressed by the same solution and where competing requirements may exist, including how to best make capital investments and meet operation and maintenance requirements, according to an EPA press release.

In addition, the agency hopes that integrated planning approaches will synergistically improve water quality, while providing a more affordable solution to financially strapped local governments.

The new guidance encourages, among other things, green infrastructure such as rain gardens and permeable pavement that can treat rainwater at its source before it overtaxes combined sewer systems.

The new guidelines, outlined in a memo to regional offices, originated at the agency's Office of Water and Office of Enforcement and Compliance.

The memo says that this new guidance will assist municipalities with prioritizing infrastructure investments to address their most serious water quality issues and provide more flexibility to use cost-effective stormwater and wastewater management solutions.

More information is available at <http://cfpub.epa.gov/npdes/integratedplans.cfm>

UF institute named Center of Excellence. The EPA designated the University of Florida's Water Institute in Gainesville as a Center of Excellence for Watershed Management. This is the second such designated institution in Florida.

Representatives of the University of Florida, the Florida Department of Environmental Protection and U.S. EPA Region 4 signed a memorandum of understanding to establish a program that will help communities develop and implement locally sustainable solutions for problem watersheds.

As a recognized Center of Excellence, the institute will receive EPA technical assistance, promotion from EPA, EPA letters of support for funding opportunities and assistance with a number of opportunities for the institute's involvement in local and regional watershed projects.

One area currently under collaborative scrutiny is prevention, reduction and management of watershed sources of water contamination. Examples are stormwater runoff management from farms, roadways and buildings.

EPA Region 4 began designating Centers of Excellence for Watershed in 2007, working primarily with southeastern colleges and universities.

Embry Riddle grant. The EPA awarded Embry Riddle Aeronautical University in Daytona Beach with a \$13,000 proposal support award to develop a portable solar water purification system for public use during disaster recovery.

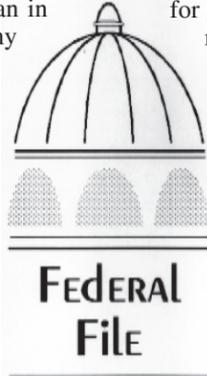
According to the grant application, faculty and students will engineer a two-to four-gallon-per-minute solar water still. It can be set up in areas lacking electricity or other infrastructure, or perhaps after a natural disaster that damaged infrastructure.

The system will be collapsible so it can be carried in a backpack by a single person, who could deploy it in 30 minutes. The system would provide clean, safe drinking water for between 750-1500 people per day using solar power.

The grant was awarded through the EPA's People, Prosperity and the Planet program. Embry-Riddle received a Phase 1 grant that will be spent during the current 2011-2012 school year.

Embry-Riddle joins 45 other college teams across the country in the P3 program. It was one of seven other southeastern colleges selected to receive grants.

ACOE contracts awarded. The U.S. Army Corps of Engineers recently

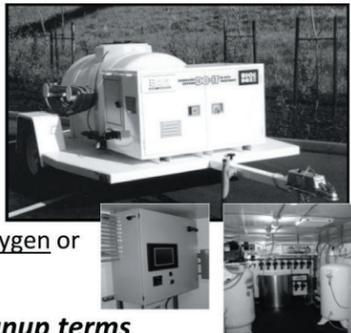


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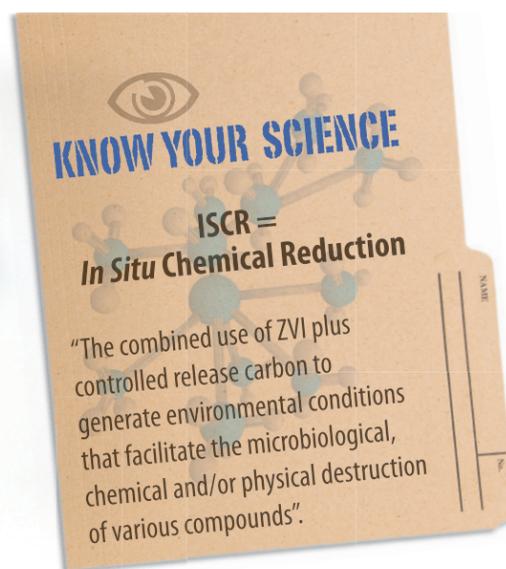


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ORIGINAL APPROVED

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Apopka officials green-light southside landfill plans

Staff report

City of Apopka officials gave the go-ahead in late October for the nation's largest waste handler to apply for permits to open a full-service landfill within their city limits.

Waste Management Inc. wants to convert its Vista Landfill in South Apopka from a construction and demolition debris landfill to an operation capable of accept a wider range of waste materials.

Waste Management must now obtain permits from the Florida Department of Environmental Protection and from the city. The company has offered the city a donation of \$1 million and other incentives to move the conversion ahead.

Central Florida has just six Class I landfills, with one each operating in Orange, Seminole, Osceola, Lake, Volusia and Brevard counties. All are run by county government except the Osceola facility, which is privately owned.

The Orange County facility is one of the largest in the state and has enough capacity to operate for decades.

To win the city's support for the landfill conversion, Waste Management must meet state standards for odor and litter control, and implement a number of environmental safeguards.

An older Waste Management landfill north of Keane Road stopped taking construction and landscape debris several years ago.

Pompano Beach contamination. Flash Cleaners, a dry cleaner that operated from 1977 to 2001, is suspected of contaminating property in Pompano Beach.

The shop now serves as a drop-off facility for other dry cleaning businesses.

The Broward County Health Department said that the manner in which waste fluids were handled and disposed of polluted groundwater and soil on the site.

However, they said that municipal drinking water has not been affected by chemicals from the site.

Testing of waterways near the business indicated contaminant levels within allowable limits, said the health department.

A final report, addressing all comments and concerns, will be a ready in early 2012.

Officials plan to continue to monitor contamination levels on the site.

UCF green tech grant. The University of Central Florida is leading a team that won a \$1.3 million grant in a White House competition aimed at developing a greener economy.

Each of six groups from around the country will receive about \$1 million from the U.S. Commerce Department's Economic Development Administration and up to \$6 million in additional funding and technical assistance from the U.S. Departments of Agriculture and Energy, the U.S. Environmental Protection Agency and the National Science Foundation.

The UCF-lead team includes the Technological Research and Development Authority in Melbourne and the Florida Energy Systems Consortium at the University of Florida in Gainesville.

The Florida partners will work together to speed up the development and commercialization of research in clean technology areas such as solar power, hydrogen fuel cells and ethanol production.

UF biofuels grant. A University of Florida led research team has won a three-year, \$6.3 million grant to develop genetically improved loblolly pine trees that yield greater amounts of terpene biofuels for transportation fuels.

The grant, awarded by the U.S. Department of Energy's Advanced Research Project Agency, is part of a \$156 million funding package dedicated to 60 innovative clean energy projects.

The researchers hope to bring about a five-fold increase in the amount of terpene produced from loblolly, making it

cost-competitive with petroleum-based fuels.

Loblolly pine is planted on more than 25 million acres in ten southeastern states. The forest products industry provides 5.5 percent of all jobs in the region, according to UF figures.

Jax job ax. The directors of public works and environmental compliance were among more than 50 workers let go by city of Jacksonville Mayor Alvin Brown.

According to the mayor's office, the elimination of 30 jobs will save the city nearly \$1.2 million next year.

The salaries of the 23 others let go amounted to \$2.2 million, although most of those jobs will be filled by new mayoral appointees.

Bird on board. Alachua County Environmental Protection Director Chris Bird has been elected the new chairman of the National Association of Local Government Environmental Professionals' board of directors.

The national organization's membership is comprised of local government

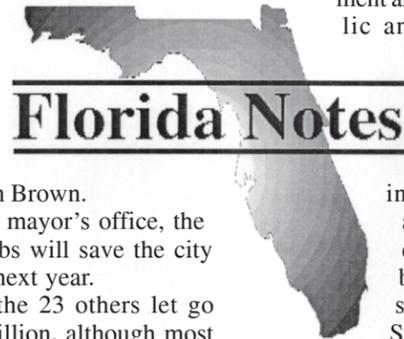
employees working in environmental protection and compliance.

In-Situ acquires PR Aqua. In-Situ Inc. acquired PR Aqua Supplies Ltd., a leading aquaculture solutions provider based in Canada. PR Aqua designs and integrates comprehensive systems for water treatment and fish handling in the public and private sectors on a worldwide basis.

The partnership with PR Aqua adds to In-Situ's sales, service and training expertise in the aquaculture market and strengthens their presence in the market, which began with the 2009 acquisition of Integrator Aqua Systems Inc.

In-Situ designs, manufactures, distributes and rents environmental and aquaculture monitoring systems. For over 40 years, they have provided water monitoring markets with innovative solutions.

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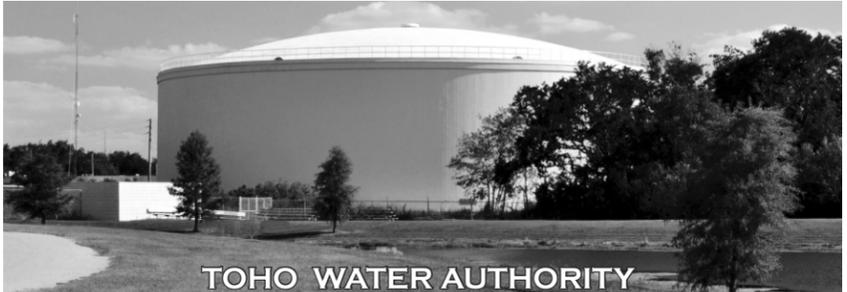
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Southwest Florida WMD announces plans to lay off 150 employees

Staff report

The Southwest Florida Water Management District announced plans to lay off 150 of its 760 employees, a move officials said was forced by state-mandated budget cuts.

Environmental activists, including Charles Lee of Audubon Florida, raised concerns that the drastic personnel cut will make it extremely difficult for the regional water agency to fulfill even its core missions.

The staff cuts were part of Florida Gov.

Rick Scott's directive to slash \$700 million from the budgets of the state's five water management districts.

Swiftmud spokesman Robyn Felix said the cuts will not impact the agency's ability to monitor water supply or quality. She said the agency will continue to protect water resources and provide funding for local governments to implement projects.

Audubon's Lee argued that the staff cuts will impact water quality and supply, hinder future economic development, harm the environment and curtail recreation opportunities for the public.

Robbins named to St. Johns board. George Robbins, a former chemical executive with a history of feuding with Northeast Florida environmental regulators, has been named to the governing board of the St. Johns River Water Management District.

Despite his history, people who faced off with Robbins in the past said they felt he could help the agency.

Among them, W.C. Gentry, now chairman of the Duval County School Board, said that he expected Robbins to do a good job. Over 20 years ago, Gentry and Robbins locked horns when Gentry was environmental counsel to former Jacksonville Mayor Tommy Hazouri.

Robbins replaces Hans Tanzler III on the board, who left in July and was recently appointed as the water management district's new executive director.

Robbins' appointment is subject to state Senate confirmation.

Low water levels provide benefits down south. Low water levels that extended into the wet summer season allowed the South Florida Water Manage-

ment District to complete several environmental enhancement projects.

The lower water levels allowed the district to plant native trees and bulrush, and stock apple snail eggs.

SFWMD Executive Director Melissa Meeker said the positive side of the drought was the opportunity to do critical environmental work providing long

term benefits. She said planting vegetation when nature provides a window of opportunity improves the ecosystem as it recovers from low water levels.

Much of the work was completed in spring and early summer when low water levels around Lake Okeechobee and the Caloosahatchee Estuary made it feasible.

The efforts included planting 2,000 pond apples on the Rita Island berm around Lake Okeechobee, 600 cypress trees along the rim canal and 70 new cypress trees at Jaycee Park in Okeechobee.

Bulrush planting was started on 12 acres at the Harney Pond Canal marsh and the Clewiston Cut marsh to protect areas where muck was previously removed.

Apple snail eggs were produced at a newly constructed hatchery at Lemkin Creek in Okeechobee County, a joint effort with Harbor Branch Oceanographic Institute. The eggs were transferred to Lake Okeechobee as the preferred food source for the endangered snail kite.

Palm River restoration. A restoration project is underway on a section of Palm River, designed to improve water quality and restore habitat.

Palm River is part of the Tampa Bypass Canal, flowing from the SWFWMD's S-160 Flood Control Structure just north of the Selmon Expressway to the McKay Bay.

When the canal was constructed in the 1960s, considerable dredging of Palm River was required. A decade later areas of erosion caused by the construction were identified along the river.

In 1976, Hillsborough County and the district installed rock riprap and vegetation to curtail the erosion.

Nine years ago, the U.S. Army Corps of Engineers identified 20 acres of wetlands and 20 acres of uplands along the Palm River with potential for restoration.

The projects initial phase involves the removal of invasive plants, creates intertidal marsh platforms and restores upland areas on parcels that are owned by the district on the east side of McKay Bay near the mouth of the Palm River. Phase I will concentrate on water quality benefits and is expected to be completed in the spring of 2012.

The Hillsborough Basin Board is covering \$1.1 million of the \$2.1 million price tag. The balance will be covered by the state's Surface Water Improvement and Management program and the Department of Transportation.

Clearwater gets boost in water use. The Southwest Florida Water Management District has increased the city of Clearwater's daily allowable water consumption to eight million gallons per day.

The district's governing board, in renewing Clearwater's consumptive use permit, modified the limit. They increased it from 6.8 million to the higher amount. The increase was granted based on population projections over the next 10 years.

The increase allows the city to draw more water from its own wellfield and reduce water purchases from Pinellas County.

The permit, good for 10 years, requires the city to report monthly meter readings from all withdrawal points; maintain a water-conserving rate structure; continue a district-approved water conservation plan; and adhere to water quality and environmental monitoring plans.



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WATCH
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WATCH
From Page 4

PBC/Broward water plan stalls. The Palm Beach County Commission reserved judgment on a proposed water-sharing plan with Broward County.

In early October, the commission refused to sign-off on a plan creating a large reservoir west of Royal Palm Beach. The idea has been fostered for over two years by utilities in both counties. The proposed reservoir would take water from the C-51 canal and use it to supplement drinking water supplies.

Reluctance to move ahead is tied to past reservoir controversies as well as the politics of how to go about dividing up the new water resource.

One major hurdle for the project is the estimated \$300 million price tag. Another is the past history of reservoir projects in Palm Beach.

County Commission Chairwoman Karen Marcus said that the water sharing proposal isn't dead, but that better use of an existing reservoir on the west side of Palm Beach County makes more sense.

Clearwater expands reclaim. The addition of new water distribution lines will enable the city of Clearwater to hookup 300 new reclaimed water customers to its current system.

The city is currently laying 34,000 more feet of reclaim water pipelines that will serve the Clearwater Harbor area. Work will be completed in 2012.

The reclaimed water system is expected to provide 200,000 gallons per day and will save about 100,000 gallons a day of drinking water now being used for irrigation. The extension will also add 10,000 gallons per day for use by commercial customers.

Flood control in Winter Haven. The Garden Grove neighborhood in Winter Haven will experience less flooding and better water quality in nearby lakes thanks to a water project now underway.

Jointly funded by Polk County and the Southwest Florida Water Management District, the \$600,000 project will have a positive impact on the water quality of Lake Florence.

Polluted runoff will enter a 2.5-acre pond allowing some of the pollutants to settle. Water leaving the pond will enter an existing wetland system, filtering more pollutants, then flow into the Lake Florence outfall ditch.

IRL stormwater treatment. Brevard County is embarking on a \$2-million project that will divert polluted stormwater from Merritt Square Mall that eventually flows into the Indian River Lagoon.

A 53-acre tract is being converted into

a 22-acre retention pond and park. The runoff originates from the 900,000-square-foot mall and other businesses along SR 520.

The project is expected to be completed by 2014.

County Commissioner Chuck Nelson described the runoff pond as more like a lake featuring a dam to regulate the flow of stormwater.

The first phase of the project, due to be completed this spring, will capture runoff from 90 acres in the surrounding area. The second phase will capture runoff from an additional 80 acres.

Haines City water use. The Southwest Florida Water Management District governing board renewed and revised Haines City's water use permit.

The new 20-year permit will allow the city to use 5.9 million gallons per day.

The increase is based on projections that Haines City's population will jump from 27,233 to 44,858 over the next two decades.

The permit term of 20 years reflects the city's efforts to expand its reclaimed water system for irrigation use. Within the next 10 years, the city is expected to utilize 75 percent of the effluent from its wastewater treatment plant for the reclaimed water system.

That move will offset the use of groundwater supplies for irrigation.

The permit requires the city to report monthly meter readings from all withdrawal points; submit a 10-year compliance report; modify the permit to reflect any incorporation of new alternative sources of water; comply with the Southern Water Use Caution Area recovery strategy; maintain a water-conserving rate structure; continue to implement its district-approved water conservation plan; and adhere to the water quality and environmental monitoring plans.

West Augustine wastewater. The St. Johns County Commission signed off on an already-approved city plan providing water and sewer connections to the West Augustine community.

A joint city-county document outlines the role of each entity in applying for a \$1.88-million design grant and seeking a \$20-million low-interest loan to build a sewage trunk line to Holmes Boulevard.

A major hurdle for the project is finding a way for low-income residents to pay for the hookups to the water and sewer systems.

Some residents are hesitant to hookup since they are currently getting water free via their wells.

Mandatory hookups have been suggested, tied to long term loans to cover the hookup costs.

Water well trial winds down. A trial to determine whether or not Bay County can drill 10 new water wells near the Washington County line is winding down. Court proceedings began on Sept. 19.

The county applied to the Northwest Florida Water Management District to dig the wells. County officials want the new wells to provide an emergency source of water in case their primary source—Deer Point Lake—becomes contaminated or exposed to saltwater intrusion.

The application was opposed by the Knight Family Trust of Washington County, James Murfee and Lee Lapansohn.

Bay County is seeking permission to extract no more than five million gallons per day or no more than 30 million gallons over a 52-day period.

Recent state law placed the burden of proof on those challenging the application. Knight Trust attorney Douglas Manson said the withdrawal of five million gallons per day is excessive.

Legal sources expect the case to be appealed to the Florida Supreme Court for a final ruling.

Bay County water recognized. The Florida Department of Environmental Protection has praised Bay County for having

some of the best drinking water in Florida. DEP recognized Bay County with the Large Community Water System award for the Northwest District in October. The Bay County system was one of five utilities in the region eligible for the award.

Bay County's water system supplies water to 145,000 users, almost all within the county. The utility sells water to six municipalities and Tyndall Air Force Base.

SFWMDC conservation projects. The governing board of the South Florida Water Management District approved funding for nine water conservation projects. When completed, the total water savings annually will be just over 43 million gallons.

The conservation projects include high efficiency toilet rebate programs in Broward and Miami-Dade counties, the city of St. Cloud and at the Florida Keys Aqueduct Authority; an automatic flusher for the distribution system in Coral Springs; a mobile meter reading system for LaBelle; fixed network AMR and DMA systems for leak detection in Port LaBelle; community water conservation strategies in West Palm Beach; and automatic hydrant flushing and best engineering practice projects in Cape Coral.

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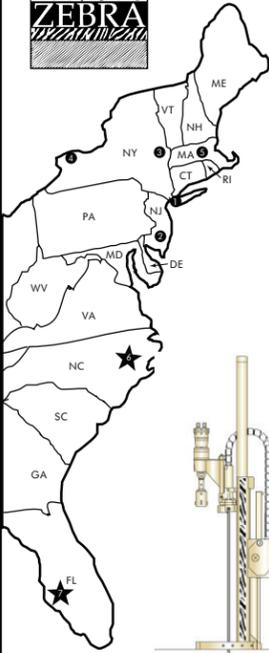
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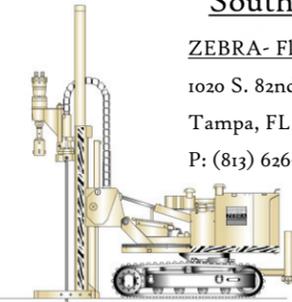



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Suwannee, St. Johns districts sign off on cooperative planning agreement

By PRAKASH GANDHI

Two of Florida's water management districts have joined forces to tackle the serious issues of groundwater pumping, and minimum flows and levels.

Drought and excessive regional groundwater pumping have taken their toll

on water bodies in the largely agricultural Suwannee River Water Management District.

There are some who point to over-pumping in the adjacent St. Johns River Water Management District as a significant contributor to Suwannee's woes.

Officials with the St. Johns district agree that the groundwater flow feeding

springs and rivers in the Suwannee district has lessened and that aquifer levels have dropped.

Now, the two districts have signed an agreement to mutually deal with these important water issues. They plan to work together in planning and permitting decisions, and to use shared science in setting minimum flows and levels for their water bodies.

The two agencies will also work together to revitalize water bodies that don't meet the standards for minimum flows and levels.

"The district feels it's good to document the things that we've been doing and other things that we are initiating to improve cooperation between the districts," said St. Johns spokesman Hank Largin.

"One of the major initiatives is a study that is underway now to analyze how hydrologic conditions have changed and what the causes and effects are."

Last year, the Suwannee district's governing board approved their 2010 water supply assessment, a district-wide analysis to determine whether water supplies will be adequate to meet demands for all water use categories for the 2010-2030 planning period while maintaining protection for the natural systems.

The 2010 water supply assessment concluded that Upper Floridian Aquifer

levels in the northeastern part of the district are in decline.

This area includes parts of Alachua, Baker, Bradford, Columbia, Hamilton, Suwannee and Union counties.

Suwannee district officials say the aquifer level has declined as much as 40 feet in Northeast Florida and up to 20 feet in the northeastern section of their water management district.

In May, the St. Johns governing board approved the city of Jacksonville's permit to withdraw 155 million gallons a day, despite concerns expressed by Suwannee district officials.

The assessment concluded that groundwater pumping will impact district river and spring flows in certain areas during the 2010-2030 planning period.

In response to the water resource impacts identified and predicted in the assessment, four water supply planning regions were designated. The planning region designation requires the development of a regional water supply plan or plans.

Suwannee officials say the solutions for sustainable water supply are regional in scope. As a result, the Suwannee and St. Johns districts, the Florida Department of Environmental Protection and the state of Georgia are working closely by sharing data, coordinating joint analyses and implementing regional water supply planning strategies.

In September, the two water management districts and DEP signed off on the final version of the agreement.

The two-page agreement calls for the districts to share information and create a report that details the causes of both the gradual westward shift of the groundwater area feeding the Suwannee district and the overall reduction in regional groundwater levels.

Under the agreement, the two districts must work jointly to develop expanded groundwater and surface water flow models that include large areas in each district's jurisdiction.

In the future, each district will establish minimum flows and levels using the same scientific process.

There will be cooperative recovery efforts when a water body in one district fails to meet those levels because of pumping in the other district. These efforts could include increased conservation or alternative water supply projects.

High bids delay Howey plant construction

By DAN MILLOTT

Replacing an aging water treatment plant in Howey-in-the Hills that dates back to the 1920s will have to wait for a town council review of bids that came in above projections.

The town had originally projected a cost for the new plant at less than \$2 million. But last year when bids were first obtained, the lowest was about \$2.3 million.

After the high bids came in, council members pared down plans for the project. They reduced the size of the storage tank, and shelved a proposed building to house the pumps and water plant offices as well as space for an emergency operation center. The revised plan called for building a shade structure over the pumps and no building.

Town Engineer Jim Shira said that when the new bids were opened in late October, they were again higher than the original projections.

Shira said the council will crunch the numbers to see if they can make one of the bids work.

The project is being financed through a state loan. For the past 15 months, residents have been paying \$10 a month extra on their water bills to pay back the loan.

Currently the town has two aging wells and town leaders fear that if one goes down, the water system would be crippled.

The new plant would be built at the Grant Street facility where the current plant is located.

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 We plan to select talks for inclusion in the technical agenda in late January.
- 2 Like to be included among a select group of companies exhibiting at FRC-South? Let us know. We have a limited number of booths available at the conference, which we expect to reserve quickly.
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Look for complete registration information in the February 2012 issue of the *Florida Specifier*. Until then, save the date, May 9, 2012, and make plans to join us.

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Gulf Coast Ecosystem Restoration Task Force releases recommendations

By ROY LAUGHLIN

The Gulf Coast Ecosystem Restoration Task Force released a preliminary report identifying three broad problem areas in need of attention following the Deep Horizon well blowout: preventing further loss of wetlands, reducing the flow of nutrients into the Gulf and enhancing resiliency among the coastal communities.

Wetlands loss is a particularly acute issue for the Mississippi River Delta. Dredging has significantly interrupted natural wetlands nourishment with sediments from natural overflow events.

Marsh vegetation has died out and open water has replaced it. Unrepaired erosion caused by waves and currents reduces marshes at their margins with open water, seriously compromising the protective

function that wetlands have provided during past storm surges.

Although Louisiana received prominent mention in the report, all Gulf States have significant barrier islands and associated wetlands that provide substantial ecologic and economic benefits, including storm surge reduction.

Reducing the flow of nutrients into the Gulf is the most ambitious goal outlined by the task force. The nutrients that foster warm-weather dead zones off the Mississippi Delta originate throughout the entire Mississippi River drainage area.

While the proposed restoration efforts focus specifically on the Gulf States, nutrient reduction programs that reduce inputs at the source could easily involve an additional 20 states. The task force acknowledges this, suggesting that review of current federal programs could be part of

the effort to reduce nutrient inflows.

The third component, enhancing resiliency among coastal communities, is far more nebulous than even the recommendation to reduce nutrient flows to the Gulf. According to the EPA's characterization, "the strategy specifically recommends working with each of the states to build integrated capacity needed through effective coastal improvement plans to better secure the future of their coastal communities and to implement existing efforts underway."

The preliminary report follows a year of collaboration among the committee's representatives from Florida, Alabama, Mississippi, Louisiana and Texas. Committee members prepared a broad framework of issues that were then taken to the public for comment at regional meetings. The draft report is a distillation and explanation of the critical issues arising from the year-long effort.

No specific funding for proposed remediation efforts is currently earmarked. Funding could come from a significant portion of Clean Water Act penalties derived from the Deepwater Horizon spill.

Currently, bills have been introduced in the Senate and House that would establish a permanent regional council to se-

lect remediation projects. The council would be funded through penalty dollars eventually obtained from BP. But creation and funding for such a council may be years away.

Many of the goals outlined in this report are to some extent already addressed by existing federal and state activities. Louisiana, in particular, has been working with the U.S. Army Corps of Engineers since Hurricane Katrina to rebuild marshes with dredge spoil.

In addition, the U.S. Department of Agriculture and the U.S. Environmental Protection Agency have been addressing nutrient enrichment due to agricultural impacts and land runoff in the Mississippi River drainage area.

The report notes that as a result of these ongoing efforts, some of its concerns may be addressed in the near future. Others will rely on additional funding proposed in the final report, expected to be released in December.

Ironically, oil pollution specifically receives little mention as a major issue confronting the Gulf region. It remains to be seen if the president and Congress can develop the will and come to an agreement to establish a regional council to address environmental issues in the Gulf.

UCSB research identifies hydrocarbon-degrading deep sea bacteria

By ROY LAUGHLIN

Recently published laboratory research confirms that cold temperature-adapted, deep sea bacteria are capable of degrading natural gas-range hydrocarbons rapidly. Degradation rates measured in the lab corroborate field measurements from 2010 during and after the Deep Horizon oil spill.

Those showed that all measurable hydrocarbons in the water plume that formed 1000-1200 feet deep were absent a within six weeks of the well's capping in August, 2010.

Molly Redmond, PhD, a postdoctoral researcher at the University of California Santa Barbara, worked with a team that studied the plume during and immediately following the spill, and has continued laboratory studies afterwards.

During the spill, researchers identified three bacterial genera based on DNA similarity to samples from known bacteria cultures. In the deep plumes dominated by low molecular weight hydrocarbons, Oceanospirillales, Colwellia and Cycloclasticus were the three most abundant genera.

Those were "at least ten times more abundant in (plume water) samples than in water outside the plume," said Redmond.

Microbiologists suspect that these abundant bacteria were responsible for metabolizing the plume's low molecular weight hydrocarbons, but co-location is only correlation, not demonstration of causal relationships.

The recently published research by the UCSB researchers provides substantial verification of the role of these petroleum-degrading bacteria in deep waters. Laboratory cultures of Colwellia including isotopically labeled hydrocarbons showed that Colwellia oxidized hydrocarbons, and a definitive link to the bacteria was evident because the carbon isotope in labeled hydrocarbons, carbon-13, was incorporated into DNA of cultured Colwellia cells.

These experiments showed that the bacteria in the plume were exploiting the hydrocarbons as food. The findings sew threads of past research into a tapestry with a discernible image.

"These particular bacteria have not been observed in surface waters. Similar [bacterial] DNA has been observed in an arctic oil spill," said Redmond.

This suggests that psychrophilic bacteria may be more abundant and active than previously thought beneath warm water seas. Psychrophilic bacteria are those that thrive in cold temperatures. Their rate of hydrocarbon oxidation was substantially higher at cool temperatures than in warmer temperatures.

Typically, reaction rates double with every 10° C increase in temperature. That leads to the expectation that lower environmental temperatures should correlate with slower rates of bacterial metabolism, the opposite of observations.

Natural selection can favor organisms with more efficient enzymes that have

optimal reaction rates at lower temperatures such as in Colwellia.

Research now explains a lot of the paradoxes that data gathered during the well blowout presented.



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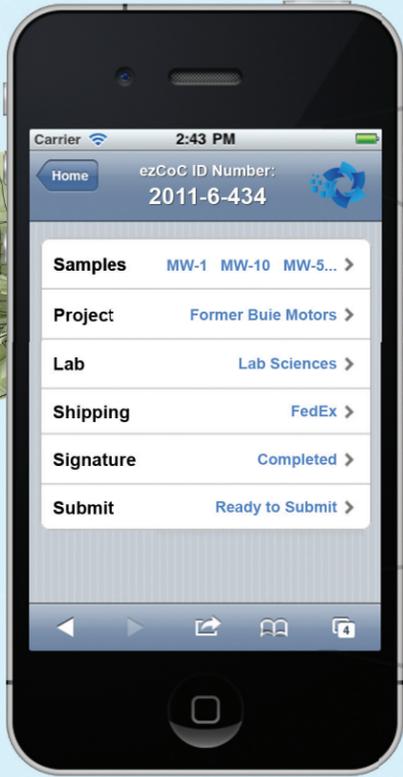
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Property of future Winter Haven recreation facility contaminated

Staff report

A Winter Haven site proposed for a city recreational complex has been cited by the Florida Department of Environmental Protection for containing cancer-causing chemicals and other contaminants. The DEP report was filed on Aug. 30.

The city has tentative plans to relocate its existing recreational complex and swimming pool from its Chain of Lakes

location to a property across U.S. 17 that once housed a fertilizer plant.

That site is owned by a company associated with Taylor Pursell that operated U.S. Fertilizer on the land until March, 2009. The plant has since been demolished.

Pursell is in the process of buying the Chain of Lakes property and has proposed a deal with the city to swap the former fertilizer plant land as part of the Chain of Lakes deal.

Pursell plans to develop The Landings, a \$150 million mixed use complex that will be the home for Theatre Winter Haven, two hotels, an apartment complex, several restaurants, a movie theater, an anchor retail store and several smaller retail outlets.

The city is retaining 87 acres in the Chain of Lakes complex for public recreation facilities.

Richard Gersberg, PhD, a public health professor at San Diego State University, said the former fertilizer plant site poses serious health risks. Among the chemicals identified at the site are the

cancer-causing pesticides dieldrin, alpha-BHC and beta-BHC—all at levels above state standards.

The land has been designated as a state brownfield site.

The city has the option of relocating the recreation complex on the retained land in Chain of Lakes or moving the complex to the former fertilizer plant site. They prefer the latter because it gives the city extra time before it has to build the new recreation facilities.

Winter Haven plans to use tax money generated from The Landings development to fund the recreation complex work.

STREAMLINING

From Page 1

Littlejohn describes it.

For at least the past 15 years, WMDs have had the authority to implement rules within their jurisdictions interpreting the laws under the purview of the ERP rules. DEP then adopts by reference each rule passed by any water management district.

“The dual rulemaking role between water management districts and the Department of Environmental Protection is time-consuming and complex. Over time it’s a system that tends to diverge in language of rules ... and in statewide consistency,” said Littlejohn.

Overall, an applicant seeking an ERP may have to meet different requirements in different regions of the state and may have to satisfy two different sets of permitting reviews for the same project.

Critics of the status quo say this drives away businesses that bring jobs to Florida, and it substantially delays projects throughout the state. Both DEP and the WMDs have been making administrative changes since Gov. Rick Scott took office.

Within the DEP, the Office of Regulatory Programs and Energy was established, with Littlejohn named as the director. The deputy secretary “provides oversight and direction to DEP’s regulatory divisions and six regulatory district offices,” according to the agency website.

The administrative change transferred supervision from the regulatory divisions with the agency and its regional district offices. The divisions now provide “guidance for policy and consistency” but all permitting is handled under the deputy secretary for regulatory programs.

The water management districts are making similar structural changes. For example, the St. Johns River Water Management District recently created a new Department of Regulatory Services.

It combined four permitting groups into one entity: environmental resource compliance, environmental resource management, surface water management and regulatory information management.

Michael Register, PE, is the department’s new director. He has been modifying the nitty-gritty details of the permitting process at SJRWMD.

“One of the main goals was to get rid of some of the adversarial nature that some had come to feel. We want to build more of a team approach ... to help people through the permitting process,” he said.

Two big changes at the St. Johns district are the centerpiece of the revised permitting methodology.

The first is a much more open and tangible effort to involve the permit applicant with regulatory agency officials earlier in the planning process, said Register.

District permitting staff are available to speak with project consultants and engineers during the project planning phase, well before permit applications are being prepared and submitted.

Communication methods are much more casual than those used in the past. For example, telephone conversations and e-mail exchanges are now commonplace.

Register said that establishing communication channels early lets applicants better understand what will be approved and what information needs to be submitted in order to support permit approval.

Permit RAIs, requests for additional information, often considerably slow the permit approval process. These are formally prepared, written and mailed communications between permitting staff and the permit applicant. There can be weeks or months between district staff preparing an RAI and receiving a response, particularly when multiple parties are involved in the permit process.

Register said that changes implemented in his new department have already reduced the number of RAIs sent over the past few months.

Electronic submission of permit applications and supporting materials is the second big change within the permitting office at SJRWMD. Register said that it is now possible to electronically submit all items needed for a permit application. Everything from forms to maps can be sent as PDF files or similar electronic files.

“It’s cheaper for consultants,” said Register. “They do not have to produce multiple packets. There’s no additional cost to produce electronic submissions. We now need only two copies of the permit application,” rather than the five hard copy sets required before the change.

Register said that all the districts now accept at least some permit materials electronically but the SJRWMD may be further along than the others.

A few years ago, electronic permit application submittals accounted for only about 10 percent of all applications. Recently, the number has risen to 40 percent. That proportion should steadily increase because district staff members are available to help applicants prepare electronic submissions.

Administrative changes and programmatic realignment are just the first steps in what may be the most significant change in statewide ERP permitting in a generation. During the past few months, the staffs of the WMDs and DEP have conducted intensive discussions on proposed legislative changes.

“All five water districts and DEP will sit down and compare (permitting regulations), section by section,” said Littlejohn. The goal is a single rule statewide for environmental resource permitting.

If the legislation is passed, presumably in the spring, several additional changes will be ushered in. The first could be statewide staff training to ensure consistent rule interpretation and permitting requirements at both DEP and the WMDs.

According to Littlejohn, there is currently language involving statewide training in draft legislation. DEP also plans a vigorous outreach program if the new legislation passes to let applicants know early on what Florida laws require and what permitting processes are necessary.

Some critics are concerned that legislation aimed at changing the permit process may also entail changes in the underlying regulations.

“There is some concern we are changing environmental standards,” Littlejohn said. “That is absolutely not the case. We are not proposing to address standards, only the procedures.”

Discussions of proposed legislation might give some the impression that environmental resource permit changes are still in the future. A more accurate assessment is that some changes remain to be implemented in the future, but substantial progress has already been made.

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Sebring sugar-to-ethanol plant inches closer to construction

By ROY LAUGHLIN

This fall, Highlands EnviroFuels LLC of Sebring received two key permit approvals from the Florida Department of Environmental Protection. The first was a prevention of significant deterioration air construction permit and the second was its environmental resource permit.

The company expects to have their few remaining permits approved by the end of 2011 so they can begin construction of a sugar-to-ethanol plant by the middle of 2012.

Highlands EnviroFuels' business model envisions a unique exploitation of Florida's potential biofuel resources. It will use sugarcane through the fall and winter as a source of fermentable carbohydrates and expects to substitute sweet

sorghum during the summer months.

Both crops in combination will provide the plant's feedstock for 10 months of the year, while allowing a two-month annual downtime for plant maintenance.

"This is a sugar-based fermentation process that is used in Brazil," said Bradley Krohn, principal and manager at Highlands EnviroFuels. "Four hundred and fifty of these ethanol plants have been built in Brazil and commercially proven for 35 years."

This facility is one-of-a-kind. "We are using technology providers involved in the sugar ethanol industry and adapting our designs to meet Florida regulations," he said.

Highlands EnviroFuels is busy with more than simply building an ethanol production plant. The company has been busy signing production contracts with local

farmers who will supply the plant with sugarcane and sweet sorghum.

"It is important to note that we're working only with farmers with developed farms. We will not be converting pastureland to farmland," he said.

Under their plan, 18,500 acres of land will be contracted to produce crops for ethanol fermentation. Krohn said that so far they have signed up farmers who will use land currently only marginally productive. They do not expect to convert groves or vegetable fields to supply biomass.

Sweet sorghum is currently not a major Florida crop. Highlands EnviroFuels is an industry sponsor of a large U.S. Department of Agriculture grant to the University of Florida to identify and develop sweet sorghum varieties suited to Florida's climate and growing conditions.

Krohn said that his company expects to use sorghum varieties from that research project as a source of biomass.

He stressed both the energy efficiency of this plant's ethanol production, as well as the minimal impact it is expected to have on Florida ecosystems.

"We have completed a robust life cycle analysis that shows an 80 percent reduction in greenhouse gas emissions com-

pared to gasoline production," he said. "It takes into consideration land preparation, fertilizer inputs, processing and transporting ethanol for blending."

Burning bagasse will supply most of the plant's energy, as well as a surplus that could be sold to the electricity grid. Krohn favorably compared his plant's carbon footprint with that of corn ethanol production.

Highland EnviroFuel's Sebring Plant is designed to produce 36 million gallons per year of ethanol. Florida's current gasoline consumption is about 800,000 gallons per year, about 20 percent less than the one billion gallons per year peak of about five years ago, according to Krohn.

It would take 16 to 20 similar plants, located throughout Florida, to meet Florida's liquid fuel needs. Krohn notes that Florida has the land and the climate to produce biomass for that number of ethanol production facilities.

Highland Biofuel's successful operation, if it begins in 2014, will be a major step towards Florida's future of renewable biomass-produced liquid fuels and a model for other Gulf states whose agricultural production could support sugarcane or sorghum production.

Judge issues ruling in Glades case

By PRAKASH GANDHI

State environmental officials and water managers have praised a federal judge's ruling regarding phosphorus standards in the Everglades. U.S. District Judge Federico Moreno has ruled that the waters of the Arthur R. Marshall Loxahatchee National Wildlife Refuge must be protected by Florida's phosphorus reduction rule.

Moreno, in a 30-page ruling, sided with Special Master John Barkett. In January, Barkett issued a report that said water leaving the refuge near Boynton Beach cannot exceed the state's phosphorus rule, which sets maximum concentrations of 10 parts per billion.

The ruling is the latest development in a 23-year-old lawsuit brought by the Miccosukee Tribe, environmental groups and the U.S. Department of Justice.

Jennifer Diaz, a spokeswoman for the Florida Department of Environmental Protection, said the state of Florida is pleased with Judge Moreno's action relating to the federal consent decree litigation.

"The restoration of the Everglades ecosystem is crucial to the future of both Florida's environment and economy," she said. The state, she added, is committed to working with restoration partners and "getting the water right in south Florida."

The refuge has more than 221 square miles of Everglades habitat. It contains one of three water conservation areas in South Florida that provide water storage and flood control. The South Florida Water Management District manages the refuge.

Gabe Margasak, a spokesperson for SFWMD, said officials are pleased with the judge's order. "We will continue to work with our partners to fulfill our shared restoration and water quality improvement goals for the Everglades," he said.

Last year, Judge Moreno ordered the district to resume construction of a \$700 million city-sized reservoir as part of the cleanup. But then in March, he urged water managers to pursue other "viable alternatives" to cleanup the Everglades.

At the same time, Moreno tentatively ordered the district to start a project known as the A-1 Reservoir, a 16,000-acre deep storage reservoir located at the south end of the Everglades Agricultural Area.

The Miccosukee Tribe and others wanted the reservoir completed because of its benefits to water quality.

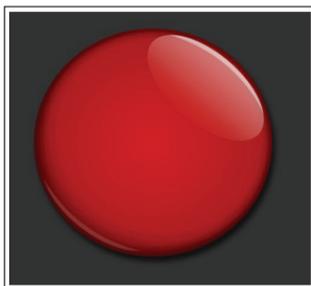
Expert witnesses from the Everglades Foundation, testifying on behalf of Florida Audubon, along with state and federal agency experts said that much better water quality improvements would be achieved through reevaluating the project on this land as a stormwater treatment area because of its proximity to existing STAs within the Everglades Agricultural Area.

Florida Audubon officials said that improving water quality to consistently meet the 10 parts per billion phosphorus levels for waters entering the refuge and Everglades National Park is critical for preventing further ecological damage.

Audubon officials said the pollution

emerging from sugarcane, other cropland and urban runoff in and around the Everglades Agricultural Area is turning healthy Everglades sawgrass marshes and sloughs into wastelands at a rate of between two and nine acres per day.

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Regulatory programs, market forces combine to improve Florida air quality

By LARRY GEORGE

The pollutant of greatest concern to Florida's air quality officials over the years has been ground-level ozone.

Throughout the 1980s, Florida's largest urban counties were designated by the U.S. Environmental Protection Agency as "nonattainment" for ozone, meaning that ozone levels violated the national ambient air quality standard for ozone in effect during those years.

By the early 1990s, conditions had improved and all Florida counties were meeting the standard.

In 1997, based on new health studies, EPA tightened the air quality standard and several Florida counties were again facing the possibility of nonattainment. However, ozone levels across the state were trending downward and by the time EPA was ready to designate nonattainment areas, no areas of the state were in violation.

Then, in 2008 EPA again tightened the ozone standard, and, again, Florida was looking at the possibility of areas falling into nonattainment. But ozone levels continued to decline, nonattainment designations were delayed, and today no areas of the state violate the 2008 standard.

Now once again, EPA is expected to review and possibly further tighten the ozone standard in 2013. Whether Florida will again escape nonattainment is impossible to predict. But, Florida's air is among the cleanest in the eastern U.S. and is expected to get even better over the next few years as emissions of the pollutants that cause ozone formation continue to decrease.

Ozone is the principal component of urban smog. Ozone builds up near the ground through a series of complex chemical reactions driven by sunlight and involving volatile organic compounds and nitrogen oxides.

VOCs are produced by natural and anthropogenic sources. Anthropogenic sources include fuel combustion in engines and industrial operations, some types of chemical manufacturing operations, evaporation of solvents in consumer and commercial products, and evaporation of volatile fuels such as gasoline.

Nitrogen oxides are emitted from motor vehicles; off-road engines such as aircraft, locomotives and construction equipment; fuel burning power plants and other industrial facilities; and other combustion sources.

Ozone has the same chemical structure and properties whether it occurs miles above the earth or at ground level. However, ozone has both good and bad effects depending on its location in the atmosphere.

Ozone occurs naturally in the stratosphere approximately 10 to 30 miles above the earth's surface and forms a layer that protects life on earth from the sun's harmful ultraviolet radiation. In the lower atmosphere, where natural ozone levels are low, additional ground-level ozone is formed as a result of human emissions of VOCs and NOx.

Near ground, ozone concentrations can reach unhealthy levels when the weather is hot and sunny with light winds. Ozone may cause inflammation and irritation of the respiratory tract, particularly during physical activity. The resulting symptoms can include breathing difficulty, coughing and throat irritation.

Breathing ozone can also worsen asthma attacks and increase the susceptibility of the lungs to infections, allergens, and other air pollutants. Groups that are sensitive to ozone include children and adults who are active outdoors, and people with respiratory disease such as asthma.

In 2008, the national ambient air quality standard for ground-level ozone was lowered from 0.084 parts per million to 0.075 ppm. Compliance with this primary standard at 0.075 parts per million is based on the three-year average of the annual fourth-highest maximum daily eight-hour ozone concentration.

In 2010, EPA announced that it was considering revising the ozone standard to a value in the range of 0.060 ppm to 0.070 ppm. This proposal has been withdrawn until the next regularly scheduled review of the ozone

standard in 2013, and the standard remains at 0.075 ppm for the time being.

The Florida Department of Environmental Protection and eight DEP-approved local air pollution control agencies monitor ozone year-round at 57 locations in 33 counties across Florida. High ozone levels only occur on a limited number of days per year, typically from spring through early fall when weather conditions are most conducive to ozone formation.

While all areas of the state comply with the air quality standard, the highest ozone levels in the state occur in Northwest Florida and the lowest in Southeast Florida.

The northwest corner of the state experiences more days with light winds than the southernmost portion of the state. Northwest Florida is also influenced more by emissions from nearby states.

Ozone levels in Florida and the entire eastern United States have come down over the past 20 years or so, and this trend is expected to continue. This improvement in air quality has been the result of ongoing, significant emission reductions from industries and individual motor vehicles. Since 2008, the trend has been steadily downward, and it is expected to continue so for at least the next several years.

As stated above, ground-level ozone is formed through a series of chemical reactions involving volatile organic compounds and nitrogen oxides. Research has found that

in Florida and throughout the Southeast, NOx emissions play a more important role than VOC emissions in the formation of ozone.

Since 2001, statewide mobile and stationary source emissions of NOx have been steadily trending downward. Preliminary data for 2010 and 2011 show this trend continuing, largely due to ongoing emission reductions from electric power plants.

NOx emissions from the power sector in Florida have decreased by 80 percent over the last decade. And, while more vehicles occupy Florida's roads, newer cars and trucks emit less pollution than older ones with the result that overall emissions from motor vehicles are also declining.

Market forces and air pollution control programs currently in place have led to lower emissions and improved ozone levels throughout Florida and much of the U.S. in recent years.

If EPA had tightened the ozone standard to 0.070 ppm in 2008, 22 Florida counties would have been in violation based on 2006-2008 data. Just three years later, using 2008-2010 data, only five counties exceed the 0.070 ppm level. The good news is that further emission reductions and further improvements in Florida's air quality are "in the pipeline."

Larry George is a program administrator in the DEP's Division of Air Resource Management with responsibilities for rule development, CAA planning, emissions inventories and air quality assessment.

Palm Bay's Heritage High helping to develop the next generation of environmental stewards

By DAVID BALDAIA

We face a dilemma. Consider this: potable water is needed to sustain human populations and communities. How we handle our water resources may impact the future condition of various ecological niches, natural communities and our human populations.

There is no certainty today about the extent, dynamics and regional distribution of climate changes forecast for the twenty-first century. Potential impacts on water resources cannot be ignored.

Florida's population is expected to reach 23.4 million people by 2020 and the state is projected to become the nation's third largest. With increasing population growth comes increased water demand.

Florida is challenged by many interrelated and competing demands for water including domestic, industrial and environmental uses. In addition, the water industry faces a looming crisis with the exodus of talent and expertise.

Consider these conclusions from a recent Water Environment Research Foundation study:

- The current average age of water utility workers is 44.7
- The current average age of wastewater utility workers is 45.4
- The average age of all other workers in the nation is four years younger, approximately 41 year of age
- The average retirement age for utility personnel is 56
- It is projected that in the next ten years, 37 percent of water utility workers and 31 percent of wastewater utility workers will retire
- Along with the impending wave of retirements comes a loss of knowledge and expertise not easily replaced
- The industry has stagnated in its development of recruiting and retention strategies
- The shortage of skilled workers ranges from managers to engineers and to operators of water and wastewater facilities.

To help meet this impending need and to foster the development of the next generation of environmental stewards, Brevard County Public Schools established the

Academy of Environmental Water Technology at Heritage High School in Palm Bay.

AEWT is a highly innovative four-year career academy focused on environmental science and water resources technology. In addition to positioning students for enrollment in continuing post-secondary studies or employment, the AEWT experience will lead to graduates taking the Florida Department of Environmental Protection's Operator Certification Program Level C Examination for water and/or wastewater.

Through a collaborative effort of the DEP, the Florida

Department of Education and the former Employ Florida Banner Center for Water Resources, the capstone course in the AEWT program of study is the DEP Operator Examination preparation course. This is the first such secondary program in Florida dedicated to the field of water technology.

The goal of this program is to help develop the next generation of environmental stewards, who are actively working to improve the environment and enhance drinking water distribution and wastewater treatment systems.

The program will produce graduates who are proficient in water and wastewater treatment technologies and water resource management.

Moreover, these students will enter the workforce with the knowledge and skills needed to solve many broad-based environmental challenges.

Students involved in the AEWT program will focus on many issues related to water, such as preserving sustainable domestic water quality, locally and globally; enhancing water distribution efficiency; controlling stormwater erosion and sedimentation; operating backflow and cross-connection equipment; and mitigating the challenges of wastewater treatment, including effectively operating wastewater treatment facilities, providing proper and environmentally friendly disposal of sludge and increasing the use of reclaimed water for irrigation.

To support this unique program, Brevard County Public Schools gathered a network of environmental and water technology professionals to collaborate with AEWT to take this program to the highest level. Partners

An open letter to Santa Scott

Dear Santa Scott,

My friend, Virginia, suggested I write to you since our state legislators will be concentrating on redistricting during the 2012 legislative session and not on the budget.

Protecting the environment does not hamper economic development. Properly managed programs protect the environment that provides the high paying wage earners with the lifestyle and amenities they want and businesses can use to their advantage.

Improperly managed programs cause delays that frustrate business owners and operators, increase the cost of doing business in Florida and damage the very amenities high wage earners want. Implementing my wish list will reduce delays and get Florida's economy growing again.

Fully fund the Florida Department of Environmental Protection, especially the cleanup programs that are paid for through a trust fund or private partnerships. The brownfields, dry cleaners, Everglades restoration and petroleum storage programs return \$5 to \$10 for every dollar spent through improved property values and economic development, and reduced crime and unemployment.

Return discharge regulations to science-based standards

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BALDAIA
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Florida Specifier

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Goldenrod, FL 32733

Michael R. Eastman
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The Florida Specifier welcomes columns, articles and letters to the editor on any subject or issue pertinent to the environmental, regulatory and technical areas the newspaper covers. We reserve the right to edit all submissions for newspaper style and publish submissions on a space-available basis.

Calendar

December

DEC. 1—Course: Backflow Prevention Recertification Review, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 2—Course: Backflow Prevention Recertification Exam, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 3—Course: Backflow Prevention Recertification Review, Jacksonville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 4—Course: Backflow Prevention Recertification Exam, Jacksonville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 5—Course: Backflow Prevention Recertification Exam, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 6—Course: Backflow Prevention Recertification Exam, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 6-7—Course: Emergency Preparedness for Water & Wastewater Utilities, Ft. Lauderdale, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 7—Course: 4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 7—Course: 8-Hour Training Course for Spotters at Landfills, C&D Sites and Transfer Stations, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 7-8—Course: Initial Training Course for Transfer Station Operators and Material Recovery Facilities - 16 Hour, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 7-9—Conference: 2011 FSA Winter Conference, Tampa, FL. Presented by the Florida Stormwater Association. Call 1-888-221-3124 or visit www.florida-stormwater.org.

DEC. 8—Course: Water Distribution System Security, Ft. Lauderdale, FL. Presented by the University

of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 8—Course: Lead: Renovation, Repair & Painting, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 8—Course: Backflow Prevention Recertification Exam, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 9—Course: Backflow Prevention Recertification Exam, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 9—Course: Backflow Prevention Recertification Review, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 10—Course: Backflow Prevention Recertification Exam, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 10—Course: Backflow Prevention Recertification Exam, Bradenton, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 10—Course: Backflow Prevention Recertification Exam, Miami Lakes, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 12—Course: Backflow Prevention Recertification Review, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 12-14—Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 13—Course: Backflow Prevention Recertification Exam, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 13-16—Course: Wastewater Class C Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

DEC. 16-17—Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 5-8—Conference: 27th Annual Everglades Coalition Conference, Hutchinson Island, Stuart, FL. Hosted by Earthjustice. Contact Julie Hill-Gabriel at (786) 246-2903.

JAN. 10-11—Course: Emergency Preparedness for Water & Wastewater Utilities, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 12—Course: Water Distribution System Security, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-957

JAN. 12—Course: Backflow Prevention Recertifica-

tion Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 18—Workshop: FSAWWA Regulatory Workshop: Where is Water Use Regulation Going? Orlando, FL. Hosted by the Florida Section of the American Water Works Association. Contact George Schlutermann at (407) 926-4381 or gschlutermann@burnsmcd.com.

JAN. 18-19—Course: Green Building Fundamentals for the LEED Green Associate, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.



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GIMPELSON

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from court-ordered numbers chosen to satisfy a lawsuit. Use the data generated by our professors and their graduate students with input from manufacturers who supply the treatment technologies to set discharges limits where agreed orders or local regulations have not been issued. Also, give the agreed orders a chance to work before mandating new discharge numbers.

Modify the risk-based closure program, RBCA, to reduce cleanup costs at sites with very low levels of contamination. California, Nebraska and Oregon have established RBCA programs that are more streamlined than Florida's programs but provide the same or even more protection to the environment and the health of children.

Increase the funding of the Long Term Natural Attenuation Monitoring and Low Scored Site Initiative programs by 50 percent or more. These programs effectively close sites at significant cost savings especially when cleanup target levels have been reached without active remediation. Approximately a third of the sites entering these programs receive closure or no further action letters.

Encourage the use of innovative in-situ and ex-situ remediation alternatives to landfilling and extraction remediation processes. The DEP-accepted alternatives use less energy and resources, and cause fewer neighborhood problems while destroying the contamination on-site allowing for more state-funded remedial actions to move forward. This is especially true at sites that have not met cleanup milestones for the last two years.

Your friend and concerned Floridian,
Laura Gimpelson, PE, Principal
LG Environmental Engineering
Orlando

January 2012

JAN. 2-6—Course: Backflow Prevention Assembly Tester Training and Certification, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 5—Course: Backflow Prevention Recertification Review, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

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Land O'Lakes homeowners discover neighborhood was built on landfill

By PRAKASH GANDHI

Homeowners in Pasco County should be compensated because they were not adequately notified about an old landfill sitting underneath their homes, said a Florida lawmaker.

State Sen. Mike Fasano (R-New Port Richey) has sent a letter to Florida Attorney General Pam Bondi asking her to investigate the issue.

The controversy centers on Suncoast Meadows, a subdivision developed by Lennar Homes in Land O'Lakes, which

contains about 50 houses, all of which were built on land that was once a landfill.

Residents are worried about their health and property values after learning that a landfill once existed under their homes. Some say the soil on the site near the old landfill sometimes smells.

The Florida Department of Environmental Protection has installed monitoring wells to check for gas emissions in the area.

Fasano said he is very concerned about the issue. "The homeowners have found out only recently that they bought homes

on top of the landfill," he said. "My concern is why the homes were built on top of the landfill and why the homeowners were not adequately notified. They should have been told that the area was once a landfill."

He said he has asked the attorney general's office to investigate to determine if any laws have been broken.

Fasano added in November that representatives from Lennar have agreed to meet with him.

"The law is pretty clear about this," Fasano said. "When a homeowner sells a house, he must disclose that information to the prospective buyer."

"I think it's pretty clear the builders would never have sold any of these lots had it been disclosed to the potential homeowners that there was a landfill there. I know I would not have bought there."

Fasano said he believes the homeowners should be adequately compensated.

"These are families and retirees," he said. "Many of them have put their life savings into buying a dream house. Now, they realize that their dream home is worthless. Who is going to buy a home that sits on an

old landfill?"

The developer, Miami-based Lennar Homes, discovered the landfill on part of the property and discussed possible solutions with the state. The landfill was mentioned briefly inside manuals provided to homeowners at closing.

When the neighborhood was being built, the developer discovered that the landfill was bigger than it expected. Lennar dug up the junk and buried it under what is now a soccer field and neighborhood park.

State records show Lennar asked for advice from DEP when it discovered the landfill on about 12 acres. No houses were built on that portion of the property.

Lennar said it notified DEP when it found more trash on about six more acres where it planned to build homes.

DEP asked Lennar to install wells to monitor methane gas and ammonia in groundwater. Lennar has tested air quality inside 20 homes and also said it tested the gases near the surface. It found no levels high enough to pose a risk to people.

Representatives from DEP and Lennar did not return calls for comment.

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BALDAIA From Page 10

speaking to students in the classroom and laboratory on topics such as field techniques, water treatment processes, sustainability, lagoon program initiatives, GIS/GPS technologies and environmental conservation.

Partners donate their time and talents by hosting student interns, serving as mentors, contributing equipment and materials, providing professional development, and serving on the AEWT program advisory committee.

The city of Palm Bay Utilities Department has donated equipment to establish an outdoor wet lab for backflow, cross-connection and other operations essential to hands-on student experiences.

Students master rigorous and relevant performance standards, experience multiple hands-on field experiences, conduct real-time research, complete internships and participate in a mentor/mentee experience. In addition, they are required to enroll in a program where they fully en-

gage in the scientific method and deliver a critiqued research project.

Student participation in such direct educational experiences and the interaction with industry professionals such as mentors, internship supervisors and post-secondary researchers at seminars and conferences will help them develop an enlightened perspective regarding environmental stewardship and direct their energies towards improving and sustaining our fragile environment.

As Benjamin Franklin said, "When the well is dry, we know the worth of water."

David Baldaia is a career & technical education resource teacher in the Office of Career & Technical Education with Brevard County Public Schools in Viera. He can be reached at baldaia.davidr@brevardschools.org or (321) 633-1000, ext. 398.

Editor's note: For additional information about the program, contact Somer Sutton, Director-AEWT, Sutton.somer@brevardschools.org or (321) 722-4178.

NOTES From Page 3

gizing in water treatment and fish handling solutions to the public sector, private enterprise and research institutions around the world.

ALS acquires CAS. ALS Group acquired Columbia Analytical Services, the environmental testing laboratory network headquartered in Kelso, WA, with six locations in the U.S. including Jacksonville.

With over 330 employees, CAS offers a broad portfolio of analytical methods and testing procedures for evaluating the authenticity, origin, safety, identity, composition and purity of chemical and biological substances and products. CAS's clients include government agencies, Fortune 500 companies, engineering and consulting firms, and many regional businesses.

Australia-based ALS Group is a global, diversified testing and inspection services company with a presence on five continents, offering a broad range of services to leading global companies. Their

services support mining and mineral exploration, commodity certification, environmental monitoring, equipment maintenance, food and pharmaceutical quality assurance, and industrial operations.

New Tersus rep named. Tallahassee-based Performance Technologies LLC expanded its groundwater remediation product line to include soil and groundwater remediation technologies from Tersus Environmental.

The product line includes Tersus' complete family of electron donors, peroxygens and the MicroBlower, a passive soil vapor extraction technology patented by the U.S. Department of Energy's Savannah River National Laboratory.

Performance Technologies, led by Don Ray, will help support Tersus Environmental's commitment to providing outstanding customer service and assistance, helping to ensure superior remediation outcomes.

Ray has been an independent representative for remediation equipment manufacturers for more than 10 years.

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GUILLORY

From Page 1

from Jupiter. "To do that, we are going to have to be much more efficient in what we do every day.

"We are looking at our organizational structure—every department, every sector, everything that the district does from the perspective of efficiency. In other words, can we do the work better, faster and cheaper?"

Guillory replaces David L. Moore, who resigned in May. Guillory has 25 years of water resources experience in Florida and throughout the Southeast U.S.

Before joining the district, he served as vice president and Florida Gulf Coast area manager for Brown and Caldwell, a national consulting firm. Before that, he was vice president and southeast water resources division manager for PBS&J, now Atkins North America.

When Florida Gov. Rick Scott took office, he ordered the budgets of the state's five water management districts cut by \$700 million for this fiscal year. He has told all five of the state's water management districts that he wants their executive directors' salaries capped at \$165,000.

Guillory has already let two of his deputy executive directors go as well as the agency's long time attorney, and demoted a third deputy director.

But Guillory said he doesn't expect to make any significant changes to existing programs for the next couple of years.

"We have some reserves that we are drawing on to maintain our current levels of services for the next couple of years," he said. "But at that time, we will need an increase in funding or will have to make dramatic cuts to continue with our core missions."

Those missions include providing leadership in water supply, flood protection, water quality and natural systems pro-

tection in the 16-county region.

The district's ad valorem revenue of \$105 million is much less than its \$155 million budget. The district is making up the difference with financial reserves and money that is returned when projects are canceled.

Guillory said there are currently no plans to close any Swiftmud offices. There also will not be any short-term changes to its water conservation and reclaimed water efforts.

"Similarly, we will continue to invest in stormwater projects," he said. "In fact, as of today, the Southwest Florida Water Management District has budgeted and committed to spending \$480 million in current projects in the region in the next few years."

The district just reduced its staff by 150 positions of which about 40 are funded vacant positions or contractual positions whose work is winding down.

Guillory said he believes the district can recover \$15 - \$20 million of its deficit through restructuring and other cost-saving measures. "However, the remaining deficit must be made up with increased revenue or we are facing significant changes to the valued services we provide to our region," he said.

The restructuring is expected to save the district more than \$15 million a year. Part of the plan includes realigning staff based on the type of work they do. One proposal is to move water quality and other data collection and monitoring programs into the operations, maintenance and construction division.

This change, Guillory said, could lead to cross-training opportunities. For example, field maintenance staff may assist in sampling work in the future.

The district is also considering creating a natural systems and environmental restoration bureau within the resource management division to address growing

Appelbaum said the new plan calls for projects to be bundled by region. So instead of going to Congress for each project, they can seek funding for several related projects at the same time. That, he said, would also speed the process.

Another aspect of the Everglades cleanup involves a mandate for the state to attain a phosphorous reduction goal by 2012. But the state Legislature this spring moved to push that deadline back to 2016.

In October, Gov. Scott met with Secretary of the U.S. Department of Interior Ken Salazar seeking the additional time. He also offered his own plan to resolve some of the legal disputes over Everglades' water quality.

The governor's plan would use publicly owned lands to store and treat water in the Everglades Agricultural Area.

The Scott plan would downsize some construction projects and rely more on water storage on public and private lands. The governor contended the projects could be built faster and at lower cost.

The plan received mixed reviews from federal authorities.

In a Nov. 10 letter to the governor, four agencies spelled out areas where the plan did not go far enough. Salazar, meeting with the *Miami Herald* editorial board on Nov. 14, said that he was optimistic the dialogue would continue.

water quality issues.

In addition, finding alternative water sources is important, Guillory said. But the sagging economy has allowed the district time to "catch up" in doing so.

"The Southwest Florida Water Management District has done an excellent job in the last ten years of dealing with water supply. But we still have areas where we are trying to reduce our pumping," he said.

In the past, the region has been known for its so-called "water wars," as competing interests in the Tampa Bay region have battled over water, taking their fight to the courtroom. Guillory said the dismal economy requires everyone to work together.

"The best solution is one that is developed by all parties together," he said.

Guillory is a past president of the Florida Stormwater Association and a member of the Florida Water Environment Association and the American Water Works Association.

"This was a unanimous choice by the board," said H. Paul Senft Jr., district governing board chairman, in a press release. "Blake is the right person at the right time for this district. His extensive experience in the private sector and the contacts he has throughout the state and the nation will serve the district well as we move forward meeting the critical water needs of west Central Florida."

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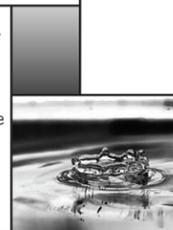
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GLADES

From Page 1

The estimated cost of the unbuilt section is \$324 million and will take four years to construct.

Appelbaum said the 1960s elevated roadway has four water management gates that allow for control of water at various times of the year. It was constructed for the South Florida Water Management District but is providing little help with restoring the proper sheet flow to the National Park south of there.

Shirreffs said the 4.5-mile section yet to be built has been approved by the U.S. Department of Interior, but must pass through Congress for final authorization.

She said each of the 68 projects does one of three things: "they store water, they clean water or they move water to get it back to where it was originally intended to flow."

So far the district has acquired land to store water and built man-made wetlands to clean it. But officials point out that removing blockages does little good if there is no water to move.

One need only look at the Kissimmee River that was returned to its original path some years ago.

The beauty of the accelerated plan, according to Shirreffs, is that "the store, clean and flow projects can be constructed and completed at the same time."

Will funding cuts limit monitoring of Glades cleanup efforts?

While environmentalists and other friends of the Everglades cheered recent moves to speed up restoration work, drastic funding cuts in monitoring efforts make checking progress problematic.

Paul Gray, science coordinator for Lake Okeechobee watershed programs for Audubon Florida, voiced big concerns.

He compared Lake Okeechobee and the Everglades to patients in a hospital emergency room. He said the last thing you would want to do in the ER is to cut off the monitoring equipment.

Monitoring programs that might have done that job have been cut by 60 percent. Those cuts may limit the ability to predict algae blooms, monitor pollution, provide real-time water level data and assess survival rates of endangered species.

"We are very concerned about the monitoring cuts," said Dawn Shirreffs, Everglades restoration program manager for the National Parks Conservation Association. "Accurate data are essential to assess the health of the ecosystem and identify restoration progress. Cuts made this year by the Florida Legislature to the South Florida Water Management District budget forced the scale back in order to advance critical restoration projects."

FEDFILE

From Page 2

awarded two contracts for replacement of water control structures in the Everglades. All four structures are part of the Herbert Hoover Dike around Lake Okeechobee.

Replacement of Culverts 1 and 1A in Glades County will be performed by Coral Gables-based Odebrecht Construction, which will receive \$47 million by the time

their work is completed.

Culvert 11 in Martin County and Culvert 16 in Palm Beach County will be replaced by Harry Pepper & Associates of Jacksonville. That company will receive \$42 million for its efforts.

According to the corps, these water structures provide both irrigation water flows and drainage.

The Herbert Hoover Dike was con-

structed in the 1930s to control flooding from Lake Okeechobee. Upgrading control structures such as the four covered by these two contracts will, according to a corps spokesman, reduce the possibility of failure that poses a risk to adjacent landowners and their property.

Wind energy. Small wind generators, those generating 100 kilowatts or less, now contribute an estimated 179 megawatts to U.S. electricity generating capacity. The American Wind Energy Association reported a 26 percent expansion in sales for small wind generating systems during 2010.

Nearly 8000 systems were sold last year at an aggregate price of \$139 million. They added 25.6 MW of wind-generated electricity capacity. The growth was aided by an estimated \$30 million in rebates, tax credits and grants to purchasers, users and others.

The grants were provided by federal, state and local governments. The association noted that the federal investment tax credit is set to expire in 2016.

The current 179 MW of electricity generating capacity is comparable in scale to many "utility-scale" wind farms. The AWEA reported that small wind electricity generation displaces 161,000 metric tons of carbon dioxide, equivalent to taking 28,000 cars off the road.

The 2010 U.S. small wind market report is available at <http://www.awea.org/>.

Frack water regs proposed. The EPA announced plans to regulate wastewater discharges from fracking operations. Hydraulic fracturing, or fracking, is the high pressure injection of water, sand and chemicals into shale formations to release methane gas for extraction.

The EPA proposed regulating recovered water used in fracking operations. That recovered water includes the injected water with its intentionally added chemicals and underground water that backs up the well with the recovered gas.

Water from underground is often substantially contaminated with metals and other toxic substances. The current practice is to discard the recovered water in municipal wastewater treatment systems.

But most such treatment systems lack the capability to adequately remove chemicals, salt and minerals before the wastewater treatment plants' effluent is released to surface water bodies.

The EPA's proposed policy is being developed under the currently fashionable opinion that environmental regulations kill jobs, and in this case, will deprive the country of badly needed affordable domestic energy sources.

In less than a decade, shale gas production has expanded from negligible levels to now account for about 15 percent of U.S. natural gas output. A spokesper-

son for the Independent Petroleum Association of America cautiously supported the EPA's effort, noting that a set of national standards may be advantageous to an industry currently operating profitably in multiple states nationwide.

Environmental activists including EarthJustice also support the EPA's intention to craft the new rules.

In its announcement, EPA said that it hopes to propose new rules for production water from coal bed methane production in 2013, and in 2014 for wastewater from shale gas production.

Some states including Pennsylvania have not waited for federal regulation. Pennsylvania, a leader in shale gas production, already requires drilling companies to recycle drilling and recovery water rather than dispose of it in municipal treatment plants.

EPA enhances ECHO tool. Members of the public can use the EPA's Enforcement and Compliance History Online database, ECHO, to conduct on-line searches of both federal and state enforcement activities covering over 800,000 facilities and sites in the country.

A new application within ECHO allows mapping of federal and state enforcement activities separately, or to overlay both simultaneously.

The ECHO database includes multi-year data for air, water and waste. Information in the database includes the facility name, the name of the statute under which the facility has an enforcement action, and a link to the facilities compliance report.

ECHO also includes a history of the facilities' inspections, violations and enforcement actions. All this information can be presented in a map format by state. Map information is revised monthly, reflecting database revisions within that time frame.

ECHO has received more than 10 million data queries during its nine years in use. In the last 12 months, it received more than two million queries, its most active year to date. ECHO is accessible on-line at www.epa-echo.gov.

UCF named Energy Star winner. The University of Central Florida was named as the winner of the EPA Region 4 2011 Energy Star National Building Competition: Battle of the Buildings.

UCF's winning building is a parking garage on the university's main campus in Orlando where energy use was decreased by 63.2 percent.

The 2011 Energy Star National Building Competition measured energy performance from Sept. 1, 2010, through Aug. 31, 2011. Competitors tracked their building's monthly energy consumption using EPA's Energy Star online energy tracking tool, Portfolio Manager.

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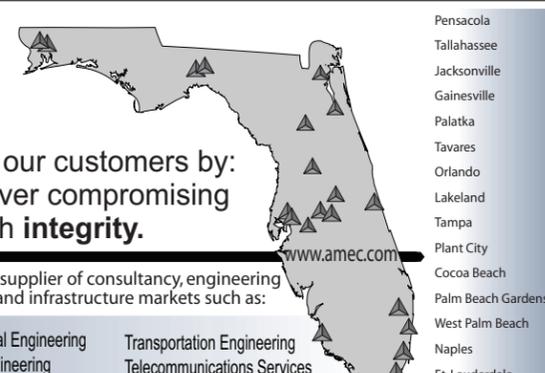
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NOAA report assesses conditions in FL Keys National Marine Sanctuary

By BLANCHE HARDY, PG

The Office of National Marine Sanctuaries at the National Oceanic and Atmospheric Administration released the first Florida Keys National Marine Sanctuary Condition Report in October.

This is NOAA's first attempt at providing a comprehensive look at the resources in the sanctuary.

The report discusses its current conditions and summarizes the pressures and management responses to those pressures that threaten the sanctuary's marine environment.

Karrie Carnes, communications coordinator for the Florida Keys National Marine Sanctuary, describes the report as a summary of numerous research and long term monitoring ongoing within the marine sanctuary.

"It identifies factors that affect sanctuary health, as well as issues that may require more monitoring or management actions," she said.

The Florida Keys National Marine Sanctuary is one of the largest protected marine areas in the country. It encompasses 2,896 nautical square miles and includes 24 highly protected "no-take" areas comprising roughly 6 percent of the sanctuary.

The sanctuary provides protection for more than 6,000 species of marine life. It's also the home of the nation's only bank-barrier coral reef and hosts one of the largest seagrass communities in the hemisphere.

"The condition report, along with other more detailed research reports produced by the sanctuary and its partners, will inform sanctuary management and guide a review of the sanctuary's regulations and marine zones," said Carnes.

She noted the review and the associated extensive public review process is due to begin in 2012 and may take two to three years to complete.

By ecological standards, the sanctuary is impressive.

And as the foundation of the Florida Keys' tourism and fishing industries, it is a huge economic asset to the state as well.

"More than 33,000 jobs in the Florida Keys are supported by ocean recreation and tourism, which accounts for 58 percent of the local economy and \$2.3 billion in annual sales," she said.

"From 2007 to 2008, more than 400,000 visitors and residents of the Florida Keys engaged in over 2 million person-days of recreational sports fishing.

"These recreational fishermen spent \$262 million in Monroe County and the Florida Keys, approximately \$103 million of which was directly spent on fishing items," she noted.

In addition to its economic and ecological assets, NOAA lists an estimated 400 underwater historical sites within sanctuary waters, fourteen of which are on the U.S. Department of Interior's National Register of Historic Places.

"Approximately 739,000 visitors and residents participated in 2.8 million days of diving in the Florida Keys between 2007 and 2008 and \$51.7 million was spent at diving and snorkeling operations," she said. "Moreover, divers spent a total of \$450 million in Monroe County supporting more than 7,500 jobs."

The report contains good news for species preservation efforts. Carnes points to the report's research results indicating "heavily exploited (mobile) species are increasing in size and abundance in the sanctuary's large 'no-take' marine zones."

In addition, researchers have documented the return of historic spawning aggregations inside the largest marine zone, the Tortugas Ecological Reserve.

NOAA's long-term water quality monitoring programs and studies also allow sanctuary managers to observe improvements resulting from management and

regulatory actions.

One such study examined water quality in the canals of the Little Venice area of Marathon before and after the construction of an advanced wastewater treatment facility.

The report noted a "77 percent decrease in fecal coliform and a 57 percent decrease in enterococci bacteria four years after cesspools and nonfunctional septic tanks were removed."

The report also identified areas where improvement is needed.

Decades of changes in flow and flushing dynamics have altered water quality and near-shore runoff, and out-of-sanctuary discharges continue to adversely impact water quality.

Thirty plus years of declining coral cover have resulted in coral-algal abundance pattern changes, and man-made impacts and infrastructure development have degraded or eliminated habitat resulting in noted alterations in the abundance of species of large coral, large body fish, sea turtles and numerous invertebrates.

The report is available at <http://sanctuaries.noaa.gov/science/condition/fknms/welcome.html>.

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ITRC releases guidance on storage, distribution and release of biofuels

Staff report

The Interstate Technology Regulatory Council recently released a document to aid state regulators responsible for overseeing the storage, distribution, release and release prevention of biofuels.

It provides information on the causes and prevention of biofuel releases; its potential environmental impacts to soil, groundwater, surface water and sediments; and appropriate methods for site characterization and remediation.

Biofuels and biofuel blends are liquid transportation fuels made from renewable

biomass feedstocks. They can be used as alternative or supplemental fuels for internal combustion engines.

The ITRC document provides an introduction to biofuels, their regulatory status and future usage projections, and evaluates the biofuel supply chain infrastructure with respect to future release points, release causes, potential media impacts and materials-compatibility issues.

In addition, it details the physical, chemical and biological properties of biofuels to evaluate their fate and transport in the environment and provides long-term response strategy considerations,

including evaluation processes for selecting monitored natural attenuation and/or active remedies.

ITRC said that since biofuels experience different behavior when released into the environment as compared to conven-

tional fuels, the document provides a correct pathway for all biofuel users.

The document is available online. Visit www.itrcweb.org and click on "Guidance Documents" to order or download the document.

TANZLER

From Page 1

so that we can be more productive."

Tanzler replaced Kirby Green III who retired in October after ten years at the district.

He will oversee an agency that serves more than four million people in northeast and east-central Florida.

The district recently cut its budget by 25 percent and laid off 130 people. But Tanzler strongly believes that the district can continue to fulfill its core mission with less money and manpower.

He said his challenge will be taking a leaner organization and turning it into a productive, cost-effective steward of the environment.

"We have communicated a vision to our employees that we are very much intact and are still on a core mission," he said.

Tanzler, 60, received law degrees from the University of Florida and has been a member of the Florida Bar for more than 30 years. He is also a certified public accountant and has worked as an assistant U.S. attorney and an Internal Revenue Service attorney.

Before this appointment, he served as the district's general counsel after spending two years on their governing board.

Tanzler said running the district is a "daunting responsibility."

"I feel fortunate to have experience with the district during the past three years both as a board member and as a general counsel," he said.

He said he will draw on these experiences and his 30 years of legal and business experience to shape what he knows will be an extremely successful agency that will be directly accountable to the public and leaders in Tallahassee.

"The water management districts have recently undergone a period of significant change as they have been right-sized to focus on their core missions and top priorities," he said.

"The process of right-sizing is a process, not an event. I fully supported the organizational adjustments that now allow us to move forward with the work we are responsible for."

He said he hopes the district can convey the attitude that permit applicants are not adversaries and that district staff can and should be problem solvers.

He said his first priorities are to

implement the recently reorganized structure, motivate employees and ensure they share the vision that he and the governing board have for the future.

He said he will also focus on completing the construction of major water supply and water quality improvement projects that the district has made progress on.

"In all cases, completing those projects will provide long-term water resource benefits in environmentally sound ways," he said.

He said there has been a distinct pause in the region's growth which has given officials more time to look at the best alternative water sources. "We must protect the environment and yet provide cost-effective alternative water supplies," he said. "We have more time now to come up with the best answers."

Another priority is to accelerate the agency's work on developing strategies to ensure water resources are protected from groundwater withdrawals.

"Minimum flows and levels are important components of the district's work to ensure adequate water supplies today and well into the future, while protecting our lakes, springs and wetlands," he said.

He said he looks forward to working closely with the state's other four water management districts. "There is a true spirit of cooperation and I feel a real need and opportunity to work closely with the other districts."

St. Johns Governing Board Chairman Leonard Wood said Tanzler brings extensive experience leading large organizations with a well-formulated and fiscally conservative approach.

"He has a very balanced background in the public and private sectors, and I am pleased that we will be able to benefit from his leadership skills and experience," Wood said.



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