

Florida Specifier

FLORIDA
REMEDATION
CONFERENCE

Oct. 11-12, 2012
Caribe Royale, Orlando

Details on Page 6

Practical Information For Environmental Professionals

Single Copy Price: \$5

June 2012

Volume 34, Number 6

Vero Beach biofuel 7

The Indian River County BioEnergy Center located near Vero Beach is scheduled to start operations in July. The technology has been under development for more than 20 years and is expected to substantially reduce greenhouse gas emissions from both cars and energy generation.

Federal case 8

The U.S. Forest Service and the Department of Agriculture, in consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, will review issues related to the removal of a portion of the Kirkpatrick Dam on the Ocklawaha.

Great waters 9

Two Florida waterways have been designated as "Great Waters" by an alliance of national, regional, state and local organizations. The American Great Waters Coalition added the St. Johns River and the Apalachicola-Chattahoochee-Flint River basin to its list.

Achieving 75 11

Reaching the ambitious statewide goal of recycling 75 percent of our waste by 2020 won't be easy. But it's possible if we focus on a few key strategies. DEP's Jorge Caspary weighs in.

Paynes Prairie restoration 12

Restoration work is slated to begin soon on the 21,000-acre Paynes Prairie just south of Gainesville. The need for the project accelerated in recent years.

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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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State's new budget retains funding for environmental programs, projects

By MELORA GRATAN

While the previous legislative session and budgetary process were viewed by many as generally hostile toward anything environmental, recent actions by lawmakers and the administration reflect a

change in attitude and a loosening of the purse strings for specific environmental programs and projects.

Gov. Rick Scott recently went through the state budget, which will take effect July 1, approving or vetoing programs and projects.

Environmental advocates were

pleased that both the Everglades restoration project and the previously annihilated Florida Forever program received money, albeit at lower levels than Scott had originally requested.

Scott had requested \$40 million for Everglades work but approved the \$30 million allocated by legislators.

"We cannot continue to let costly, ongoing lawsuits derail our progress, which is why recently I put forward a strategy that puts the Everglades first," wrote Scott in a recent newspaper op-ed piece. "We can all agree that the Everglades ecosystem is the crown jewel of Florida, and it deserves our best efforts to resolve differences and deliver results."

He also signed off on \$8.4 million for the Florida Forever land acquisition program. He has requested \$15 million for the program.

This amount is less than 5 percent of what the program had to spend before it was vetoed by Scott last year. As a result, the Florida Department of Environmental Protection is paring down its extensive list of potential properties to those that stretch the limited amount of dollars the most.

Appropriating money to both of these areas was a good decision, said Bill Preston, an environmental attorney



Photo by Dr. Patricia Medeiros, UGA

Dr. Samantha Joye (UGA), left, and colleagues sample cores from the multiple corer near the Macondo wellhead in the Gulf. A new report by the researchers (Page 13) suggests improvements to deep sea extraction damage assessments.

BUDGET
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DEP's water quality standards review process off to quick start

By ROY LAUGHLIN

In May, the Florida Department of Environmental Protection kicked off three water quality standard review initiatives that may produce revised—and most likely tightened—values for water quality regulations affecting Florida surface waters.

Revisions are proposed for Florida Administrative Code, Chapter 62-302, water quality standards. During this triennial cycle, DEP said it will focus on criteria under three headings.

The first review group relates to two areas: human health-based criteria and dissolved oxygen levels in surface waters.

In the second review, DEP will develop numeric nutrient criteria for Panhandle estuaries. Standards for Panhandle waters were not part of the package approved by the state Legislature last spring.

The third standards push will be to update the total maximum daily load standards for mercury in Florida waters.

The human health-based criteria review will evaluate human exposure risks for about 80 chemicals that Floridians could be exposed to via seafood consumption.

The list is dominated by halogenated synthetic organic compounds. Other chemical classes on the list include substituted benzenes and phenols, polynuclear aromatic compounds, and selected phthalic acid esters. The elements

antimony, thallium and beryllium are also included.

Drew Bartlett, director of the DEP's Division of Environmental Assessment and Restoration, said that many of these compounds likely face standards reductions because Floridians eat more fish than the national average suggests—not because contaminant concentrations

have increased in Florida waters.

Florida's current criteria are based on national fish consumption values. The new focus will evaluate the use of locovore fish consumption rates reflecting Floridians' greater fish consumption.

DEP
Continued on Page 14

TBW considers options after losing Hillsborough reservoir suit

By PRAKASH GANDHI

Tampa Bay Water officials say they will continue their fight after losing a major battle with the company that designed their troubled reservoir in Hillsborough County.

The utility's board is considering whether to ask a federal judge for a new trial in its \$73 million lawsuit against the company that designed the reservoir.

Last month, a jury rejected the utility's claim against HDR Engineering.

Tampa Bay Water, which provides wholesale water to two million customers in Pinellas, Pasco and Hillsborough counties, filed suit four years ago against HDR to help pay the estimated \$122 million cost of repairing the 15.5-billion-gallon C.W. Bill Young Reservoir in rural Hillsborough County.

HDR designed the \$146 million reservoir that opened in June 2005 to store

water from the Tampa Bypass Canal and the Alafia and Hillsborough rivers.

Workers first discovered cracks in December 2006. Some cracks stretched 400 feet and were up to 15.5 inches deep.

After a month-long trial in Tampa federal court, a jury took less than four hours to decide that HDR had no responsibility for fixing the cracks.

Tampa Bay Water spokeswoman Michelle Rapp said the first step in the legal process is to file a motion for a new trial with the presiding judge.

"Our legal team is moving forward with this step and that motion is due in the next few weeks," Rapp said in May.

"Once the judge rules on that motion, a time line will start for our board to make a decision on whether or not to appeal," she said. "They have not yet

TBW
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Two Florida cities make 2011 EPA list for energy efficient buildings

Staff report

Both Miami and Tampa were rated among America's top 25 cities for energy efficient buildings in 2011. The U.S. Environmental Protection Agency acknowledged these two Florida cities in its 2011 Energy Star Certification Program.

In Tampa, the energy-efficient buildings included more than 14 million square feet, saved more than \$15 million in energy costs and reduced greenhouse gas emissions equal to those from 2,200 homes per year.

In Miami, the numbers were even more impressive. The buildings encompassed more than 20 million square feet, saved \$19 million in annual energy costs and reduced greenhouse gas emissions equal to 2,800 homes per year.

Brockmeyer receives wetland award. Ron Brockmeyer, coastal wetland program manager at the St. Johns River Water Management District, is a recipient of the 2012 National Wetland Award for State, Tribal, and Local Program Development.

He was cited for his efforts to rehabili-

tate more than 20,000 acres of severely impacted coastal wetlands in East Central Florida. His projects included contributions from state, federal and local partners.

Brockmeyer is one of six individuals from across the country to be recognized for his exceptional and innovative contributions to wetlands conservation, according to an announcement from the award's sponsor, the Environmental Law Institute.

Air pollution in wilderness areas. Between March and November of this year, the EPA will issue final actions to initiate haze reduction programs in national parks and wilderness areas.

A consent agreement will result in rules under the Clean Air Act that will reduce emissions from power plants that cause haze and smoke in these areas. The plans will affect 37 states, the District of Columbia and the Virgin Islands.

The EPA's mandate is a result of a consent agreement reached in the U.S. District Court for the District of Columbia between the agency and Earthjustice, a non-profit environmental law firm.

Florida climate change prep. Only five states in the country have adequate plans to mitigate the growing threats of climate change on human health and the economy, according to a recent Natural Resources Defense Council report, "Ready or Not: An Evaluation of State Climate and Water Preparedness Planning."

It's a good news/bad news proposition for Florida. The bad news is that our state ranks among the most poorly prepared states. The good news is that the state ranks ahead of six states including Alabama, Indiana, Texas and Ohio that have done "virtually nothing" to prepare for the effects of climate change, according to the report.

Other states characterized as "inadequately prepared" include Florida's neighboring states of Georgia, Mississippi, Louisiana, and South Carolina.

Some states have made substantial plans to deal with climate change including Alaska, California, Maryland, Massachusetts, New York, Oregon, Pennsylvania, Washington and Wisconsin.

Climate change is already affecting the U.S. economy. Researchers believe that states should plan, in some cases, for far-reaching implications for water supply, water quality, accessibility to water and increased demand.

States such as Florida may experience sea level changes and flooding that will overwhelm infrastructure. In addition to the predictable catastrophe of flooding from extreme rainfall events and hurricane surges, increased discharges of untreated sewage could potentially contaminate drinking water supplies.

Adequate supplies of electricity under the increased demand of higher temperatures and prolonged warm seasons are another aspect of planning for climate change that Sunbelt states appear particularly loathe to address.

The report suggests that states should enact plans to decrease emissions of greenhouse gases from power plants, and adjust other policies to increase energy efficiency and renewable energy use.

The report also encourages each state to prepare a statewide vulnerability assessment to identify climate change impacts.

Electronic chemical reporting. The EPA is proposing an electronic reporting requirement for some types of information submitted by chemical manufacturers and handlers under the Toxic Substances Control Act.

The agency said that electronic submission will increase the speed with which the EPA can make information publicly available, increase accuracy, and provide the public with quick and easy access to chemical information.

The information affected by the proposed rule includes data relating to chemical testing, health and safety studies, and other categories not specified.

The rule, if finalized, will require information to be submitted through the agency's Central Data Exchange, an Internet portal.

In the next couple of months, the agency will provide potential users with opportunities to become familiar with the new reporting requirements, including an introduction to its web-based electronic reporting tool, testing of specific applications and opportunities for feedback from potential users.

EPA will be soliciting public comment on the proposed new rule until mid-June.

Greenhouse gas increase. In 2010, total emissions of the six main greenhouse gases were equivalent to 6,822 million metric tons of carbon dioxide.

The 3.2 percent annual increase is attributed to increased energy consumption across all economic sectors in the country.

An expanding economy and increased demand for electricity due to warmer sum-

mer temperatures during 2010 were cited as the two main reasons for the annual increase.

The EPA provided the information in "The Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2010." The annual effort tracks greenhouse gas emissions starting in 1990.

Coral species face extinction. At the dawn of the millennium, 82 coral species were found in U.S. waters, including those in Florida, Hawaii and U.S. territories in the Caribbean and Pacific. By the end of the century, there may be 56 fewer species, according to a recent National Oceanic and Atmospheric Administration report.

Multiple threats, including bleaching, disease, damage from stronger hurricanes and storms, pollution and sedimentation, chronic overfishing, rising ocean temperatures and ocean acidification are predicted to play a role in the predicted extinctions.

Over the past three decades, coral populations have declined 30 percent across all U.S. waters. Caribbean corals face the gravest threat.

All seven species found in the Caribbean are considered most likely to suffer extinction in the coming 90 years.

In 2006, elkhorn and staghorn corals became the first and only coral species protected under the Endangered Species Act. The current report makes no recommendation for listing additional corals under the ESA.

Streamlined natural gas production oversight. The Obama administration has established a committee to oversee proposed new regulations for oil and gas drilling.

Heather Zichal, White House energy and climate change advisor, will head the oversight group. It will include representatives from a dozen agencies that regulate oil and gas drilling.

The Interior, Transportation and Energy departments will be represented along with the EPA and the White House Council on Environmental Quality.

The group will examine new regulations on hydraulic fracturing and disposal of its waste fluids.

The White House said this effort was needed to ensure that federal agencies oversee any drilling work together.

The EPA is poised to propose rules on air pollution from oil and gas wells, and the Interior Department is widely expected to issue new rules for natural gas drilling on public lands.

Some industry leaders welcomed the new committee and its prospects for streamlining federal hydraulic fracturing regulation.

Predictably, a spokesman for John Boehner, Speaker of the House of Representatives, criticized the formation of the White House committee for its lack of bipartisanship.

Air pollution from frack wells. In related news, beginning in 2015, a new EPA rule will require oil and gas drillers using hydraulic fracturing techniques to capture the initial flush of emissions resulting from the well's preparation for commercial production.

This capture, referred to as green completion, requires truck-mounted equipment to capture both fluids and gases for three to 10 days after fracturing operations inject water, sand and chemicals into a new well.

Natural gas and petroleum liquids captured during green completion could be recovered and sold.

Natural gas that is not recovered between now and the 2015 implementation date must be flared to reduce smog pollution.

FEDFILE
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The *Florida Specifier* (ISSN 0740-1973), founded in 1979, is published each month for \$24.95 per year (\$49.95 for three years) by National Technical Communications Co., Inc., P.O. Box 2175, Goldenrod, FL 32733. Subscription refunds are not provided.

Standard postage paid at Orlando, FL 32862. **POSTMASTER:** Send address changes to the FLORIDA SPECIFIER, P.O. Box 2175, Goldenrod, FL 32733.

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Volusia County, state officials continue testing of wells

Staff report

Volusia County Health Department officials plan to conduct another round of testing on water wells in the DeLand Country Club area.

A year ago, the county found many drinking water wells in the community were contaminated with the pesticide dieldrin. State officials still don't know why the dieldrin is in the wells or how widespread the problem is.

In the meantime, contractors for the city of DeLand are putting in city water mains and distribution lines in the community to provide drinking water.

Under a state program, homes with wells that test at or above the state health advisory level for dieldrin can hook up to city water for free. The health department is offering to retest wells that don't meet the advisory level.

Until now, 171 homes in the community have had dieldrin levels below the state advisory level. The health department said that 116 homes have tested at or above the minimum advisory level.

If the retested wells measure above the level considered safe, property owners will have the option of signing up for the state program to cover the cost of connecting to city water.

A state site investigation is underway. The field work is complete and experts are reviewing the data. A final report is expected in June.

Meanwhile, country club residents have launched a class-action lawsuit against a dieldrin manufacturer and fear that some health problems, including cancer, can be traced back to dieldrin levels in the community's water.

Cleanup to begin in Brooksville. An administrative law judge signed an order closing the last open legal challenge to Hernando County's remediation plan for cleaning up the contaminated former public works compound in Brooksville.

The plan includes a list of methods that the city will use to remove, treat or restrict access to the public from contaminants in the soil and groundwater at the site at 201 W. Dr. M.L. King Jr. Boulevard.

Contaminants ranging from arsenic to petroleum products were released on the site while the county ran public works and fleet operations there years ago.

More than a decade later, the county ordered soil and water sampling that was needed to determine the size of the chemical plume.

A county consultant later drew up a cleanup plan that included removal of some additional soil, capping parts of the site with concrete, adding chemical agents to neutralize contaminants and other remediation means.

Last year, residents argued that the plan didn't go far enough because the entire neighborhood had been fouled by the chemicals. They also claimed that the county had overlooked the problem for years due to racial bias.

The owners of two of the properties near the site challenged the plan formally with the Florida Department of Environmental Protection, and the cases were forwarded to the Florida Department of Administrative Hearings.

A judge gave residents a chance to hire an attorney and present a legally relevant argument as to why the cleanup plan should be rejected. However, no arguments were offered and the judge closed the file.

Med-waste facility in Baker County. Integrated Waste Management Systems Inc. recently filed a draft application for permits to build a medical waste incinerator in Baker County.

The project is expected to bring 59 jobs to the county initially and as many as 100 over the long-term.

Officials say the proposed project is the result of a decision by the company to build a new facility from the ground up and comply with more stringent environmental regulations established by the federal gov-

ernment in 2009 rather than retrofit an existing facility.

The project is being planned on 24 acres owned by the Baker County Development Commission at the northern end of Enterprise East Boulevard.

The company intends to construct 92,800 square feet of building space, a 162-space parking lot and stormwater retention facility.

Baker County officials say the success of the project hinges largely on the approval of a roughly \$500,000 grant from the state's Department of Economic Opportunity.

The funds would allow the county to build an access road to the site.

Other potential development initiatives include tax breaks from the state based on employee wages and some \$22 million in tax-free construction bonds that could be authorized by the county development commission.

No-go decision for plasma plant. St. Lucie officials have agreed to terminate the county's 2007 contract with Atlanta-based Geoplasma to construct and operate a

plasma gasification facility.

Instead, county officials are putting out a request for qualifications for a company to build and run a thermal conversion facility.

Economic conditions, a lack of money and Fort Pierce's decision to leave the county landfill prompted the county's decision to end the facility contract.

Sludge plant shut-down. A judge has ruled that Marion County acted properly in moving to shut down a sludge-composting operation south of Ocala.

Circuit Judge Jack Singbrush declared that the board had "significant facts" and "competent and substantial evidence" to revoke a special use permit for Compost USA.

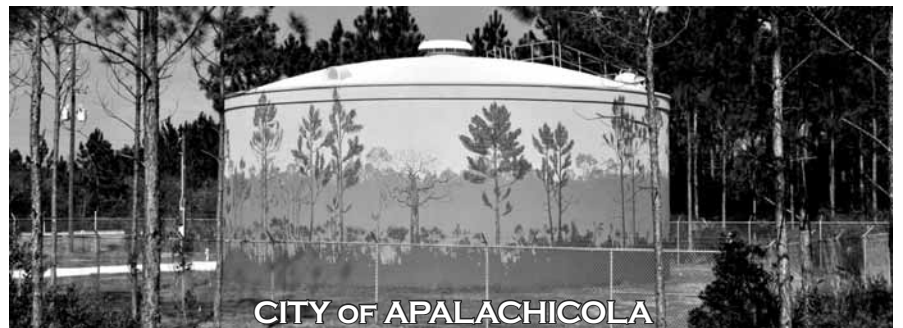
Still pending is a decision on whether the company had valid assurances from county officials that it could legally process sludge from publicly operated wastewater plants at a 38-acre site along Southeast 73rd Street.

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Florida Notes



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Florida Government Utility Authority agrees to buy Land O'Lakes systems

Staff report

The privately-owned Mad Hatter Utility, a longtime provider of water and sewer services to several Land O'Lakes communities, will be purchased by the Florida Governmental Utility Authority.

The multi-county agency will pay \$9 million upfront and another \$5 million in 2024.

The deal is subject to approval by the Pasco County Commission and the board of directors of FGUA.

In 2011, Mad Hatter had sought a \$1.7

million increase in water rates from the Florida Public Service Commission. The commission denied that request, which would have been a 233 percent rate hike.

The denial prompted Mad Hatter to intensify its search for a buyer.

The utility serves 3,500 water customers and 3,000 sewer customers in the Lutz and Land O'Lakes area. FGUA is planning to invest \$3.5 million for improvements to the 35-year-old utility.

Law firm to monitor withdrawals. A Gainesville law firm—Southern Legal

Counsel Inc.—served notice to the St. Johns River Water Management District that it will monitor a permit application by the Adena Ranch cattle operation seeking to withdraw 15.3 million gallons per day from the aquifer.

The law firm announced that it will hire its own experts to make sure the agency is not granting Adena more water than it really needs.

The firm will also look carefully at how the St. Johns district reaches its conclusions on granting water use permits.

The law firm warned that they would block the project if they find the water withdrawal amount excessive.

The Silver Springs Alliance, a recently formed environmental group, held a public meeting in early April, to focus on the application by Adena. About 10,000 acres of the 30,000 acre ranch will be used to raise 30,000 head of cattle.

The application stated that the water would be used to irrigate grass and grow hay to feed the livestock.

Ranch officials said while they are making the water use request, sufficient rains would preclude using that amount of water per day.

Marion County, Ocala agreement. Marion County and the city of Ocala struck a deal whereby the county would buy reclaimed water and sewer service from the city.

County Commission Chairman Charlie Stone hailed the agreement and called it a first step in joint city-county cooperation on water and sewer issues.

The decision will save the county millions of dollars in needed plant upgrades and will channel new revenues to the city.

The city will sell the county up to 500,000 gallons a day of reclaimed water at \$0.09 per 1,000 gallons and up to 150,000 gallons of sewage service per day at \$6.90 per 1,000 gallons for the wholesale area and Ocala Meadows off U.S. 441.

Indian River Shores, Vero Beach water deal. A 30-year franchise agreement with Vero Beach for water, sewer and reuse water was approved by the Indian Shores town council in early April.

Under the contract, residents will be charged the same rate that Indian River County charges its customers for the same service.

The deal still needs approval from the Vero Beach City Council. With that approval, the agreement would become effective Oct. 1.

Hillsboro Canal cleanup. The 50-year-old Hillsboro Canal on the border between Broward and Palm Beach counties will get a major cleanup, its first since it was built.

The South Florida Water Management District will cleanup a 7.6-mile stretch of the canal from Military Trail to three miles

west of U.S. 441.

District spokesman Randy Smith said the district has 2,000 miles of canals and projects prioritized. Work on the Hillsboro Canal tops that list.

The cleanup involves clearing of brush, obtrusive trees and dredging. The cleared banks will be re-sodded.

The project will affect some landowners near the canal. For example, the Deer Creek Golf Club will have to relocate two holes on its course.

DeBary Bayou pollution report. A long awaited U.S. Army Corps of Engineers study on the causes of water quality and flow problems in DeBary Bayou laid the blame on development and stormwater runoff—not runoff from Interstate 4 as residents and officials had expected.

The muck that lines the bottom of the bayou makes it difficult for boats to navigate between Gemini Springs and Lake Monroe.

Sarah Miller, a biologist with the corps, said the bayou's problems were traced to the spraying of invasive water hyacinths along the bayou and high bacteria counts flowing from Gemini Springs. That condition forced the closing of the springs as a public swimming area several years ago.

Miller suggested removing the hyacinth and dredging the canal instead of continued spraying that causes the hyacinth to sink to the bottom of the bayou.

Hernando Beach dredging delayed. A long-awaited dredging project at Hernando Beach may be put on hold again due to concerns from the Florida Department of Environmental Protection.

Hernando County's Environmental Services Director Susan Goebel-Canning told the county commission that DEP notified her office that some seagrass has been impacted and that the county may have to replant.

The county is withholding a \$464,781 retainage fee from BD Peabody Construction Services until the project is completed.

Pine Island stormwater project. The first phase of the \$4 million Pine Island Conservation Area stormwater project was expected to be complete by mid-May.

The project is designed to fight flooding across nine square miles on northern Merritt Island from the Kennedy Space Center to Crisafulli Road.

The project involves converting two borrow pits into retention ponds to capture polluted stormwater from the Pine Island Canal.

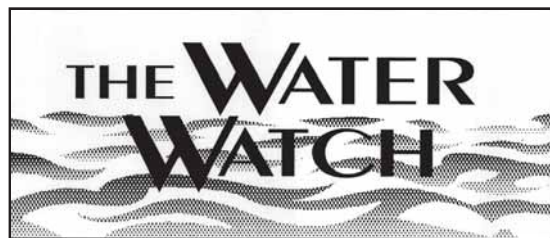
The waterway collects stormwater from a 5,970-acre drainage basin that includes citrus groves and agricultural lands, then dumps it into the Indian River.

Ernie Brown, Brevard County's natural resources director, said borrow pits are ideal for this use. He noted that several other borrow pit conversions have been successfully completed in the county.

Construction of the \$2.3 million initial phase of the project commenced in August, 2011.

The northern borrow pit is being converted into an 83-acre retention system with a weir and hydraulic pump installed.

WATCH
Continued on Page 5



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WATCH
From Page 4

A \$950,000 grant from DEP is funding part of the cost with stormwater assessments covering the balance.

Red tide off Marco. Water quality tests have detected red tide around Marco Island according to the Collier County Pollution Control and Prevention Department.

Red tide is a bloom of microscopic algae that releases a toxin that can cause fish kills and respiratory irritation to humans.

The Collier County Health Department and the Rookery Bay National Estuarine Research Reserve found low levels of red tide at South Marco Beach, Big Marco Pass and Caxambas Pass.

The low levels of red tide were identified in early April.

Lake Hancock project funding. The Southwest Florida Water Management District voted in March to pay nearly \$3 million to temporarily flood more land in connection with the Lake Hancock lake-level project.

One payment of \$2.3 million will go to Lake Hancock Partners and related enterprises of the Rogers family of Highland City for flooding an easement over a 93-acre lakefront parcel south of Circle B Bar Reserve.

Another \$665,000 settlement to William H. and Brandy Lee Stanton was approved for a flooding easement on 35 acres near Saddle Creek north of Lake Hancock.

Lake Hancock is a 4,519-acre lake at the headwaters of the Peace River. Its level is controlled to some measure by a structure on Saddle Creek north of the lake.

Pilot project helps Eustis lake. Lake County's Adopt-a-Lake program will employ a pilot project aimed at improving water quality in Lake Joanna near Eustis.

The project will use Beemats, floating wetland mats, to remove nutrients from the water. The mats are the brainchild of Steve and Forest Beeman of Beeman's Nursery in New Smyrna Beach.

The mats were installed by environmental engineering students Laura Yadon and Michael Grova and volunteers who reside around the lake.

Two Beemats, one 100-square-foot and a second 200-square-foot, were set up at selected locations on the lake.

Orange Park wastewater award. The town of Orange Park's \$10-million upgrade of its wastewater treatment system has been named environmental project of the year by the Florida Chapter of the American Public Works Association.

The upgrade began in 2000. Public Works Director Chuck Pavios said the award is a testimony to a decade-long team effort.

He cited the work of Utility Superintendent Bob Braca, former Public Works Director Bill White, former Town Manager John Bowles, Mike Velter of Legacy Civil Engineers, the city of Green Cove Springs and Ben Moore, PBM Contractors, in winning the award for Orange Park.

The APWA Florida Chapter judged the project among all those in the \$5 - \$25 million category.

SRWMD site upgrade. The Suwannee River Water Management District has launched an upgraded website to enhance water resource information in North Florida. The website's address remains the same: www.mysuwanneeriver.com.

The site features upgraded graphics and photos highlighting the regions' natural resources. The layout permits better use when viewed on smaller devices like the iPad.

Deborah Parker, who directed the redesign, said the changes should enhance the user experience when searching for natural resources information within the Suwannee River WMD area.

North Port reclaim award. The city of North Port Water Reclamation Facility recently received the David W. York Water Reuse Award for Reuse System of the Year.

The award, established in 1992 by the

Florida Water Environment Association, recognizes outstanding water reuse projects in the state.

The award is given based on a facility's environmental quality management, the water reuse system itself, and public education and information outreach.

Each day, the North Port water reclamation plant turns 86 percent of its incoming wastewater into recycled water for use on local golf courses, residential communities and city facilities.

The city is currently working on a reclaimed water transmission main.

The project, partially funded by the Southwest Florida Water Management District, will add options for parks and schools to hook up to non-potable water for irrigation.

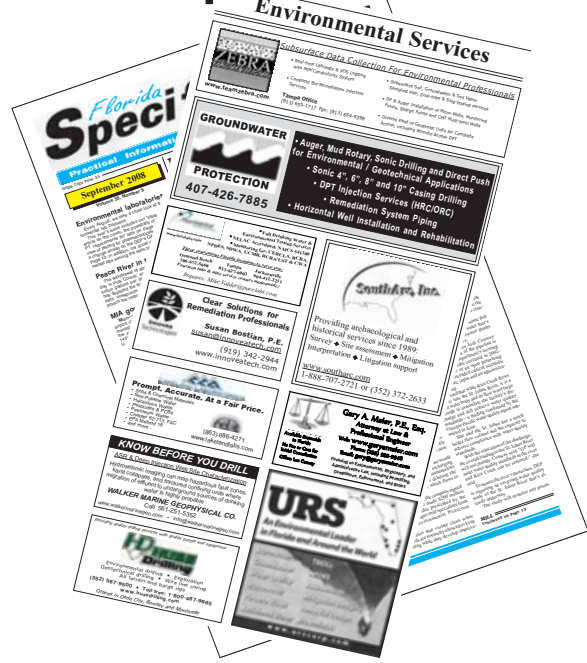
Boynton named to SJRWMD post. Palatka City Manager Woody Boynton, PE, has been tapped by the St. Johns River Water Management District to be the agency's new assistant executive director.

Boynton began work at his new post May 10.

He had been Palatka's city manager since 2007. He has also worked for Putnam County and the Florida Department of Transportation.

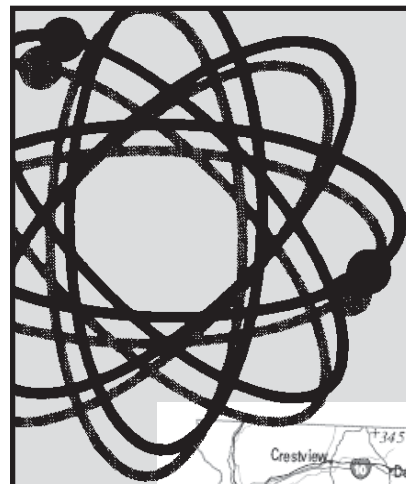
Boynton is a professional engineer who spent 10 years with an engineering firm in Maine before moving to Florida in 2001.

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We are again looking for talks on proven technologies with real-world applicability to Florida and appreciate data-heavy presentations and "roll-up-the-sleeve" approaches.

Submission Instructions

We will soon start reviewing subject matter to be included on the 2012 FRC agenda. If you are interested in being a part of this year's conference, submit an abstract of approximately 250 words by July 1, 2012. FRC presentations are strictly limited to 25 minutes in length. Mail, fax or e-mail abstracts to:

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Questions?

You can reach us at (407) 671-7777 or 1-800-881-6822, or online at info@enviro-net.com should you have any questions or need additional information about FRC 2012. In addition, visit our web site at www.enviro-net.com for the latest conference updates.

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Breakthrough biofuel plant near Vero Beach nears summer start-up

By MELORA GRATAN

Like a long-awaited summer blockbuster with never-before-seen special effects, the curtain is rising on the premiere of the Indian River County BioEnergy Center.

Boasting a number of first-of-its-kind accolades, the facility located near Vero Beach is scheduled to start operations in July and produce cellulosic ethanol by early in the third quarter.

The plant is expected to produce eight million gallons of advanced biofuels annually and six megawatts of gross electricity in July, which will be enough renewable energy to power the plant and about 1,400 area homes.

The technology has been under development for more than 20 years and is expected to substantially reduce greenhouse gas emissions from both cars and energy generation. Not only does it reduce the amount of waste going to landfills, it also breaks the link between food crops and bioethanol production, according to company officials.

However, interested spectators won't be able to preview the sights and sounds for themselves until sometime later this year so that outside distractions are minimized during the start-up phase, said Dan Cummings, spokesperson and vice president of INEOS Bio, one of the companies building the center.

The project has captured the attention of onlookers at home and abroad for reasons such as the use of technology that can utilize a variety of organic wastes headed for landfills rather than food crops in a way that produces more energy with greater efficiency.

"The traditional first-generation (technologies) are all a batch process. This is a continuous process. So when you feed it in, you get it out in seven to ten minutes compared to one to three days, which is a big breakthrough" Cummings said. "Also, we are located next to a landfill and utilizing that waste means the life cycle analysis for this fuel is 100 percent versus about 60 percent."

The type of feedstock the facility can use includes yard, wood and vegetative wastes, mixed waste plastics, tires, coal and petroleum coke.

About 90 percent of the material used will be vegetative waste such as tree stumps, leaves and grass, while the remainder will come from the solid waste stream that previously made its way into the county's landfill.

The INEOS Bio process technology includes six steps: 1) feed reception and drying; 2) gasification; 3) syngas heat recovery to generate renewable power and gas clean up; 4) fermentation or the production from syngas through biological processes; 5) filtration, distillation and dehydration or bioethanol recovery and purification; and 6) renewable power generation.

The gasification step allows for the flexibility with feedstock by enabling all of the biomass for production. Previously, bioethanol technologies have not allowed the conversion of lignin, which represents around 25 percent by weight of the lignocellulosic biomass but up to 50 percent of the energy content, according to company literature.

The use of lignin provides higher yields, the efficient use of lower cost biomass material and the separation of biofuel production from food production and land use.

The gasification portion of the process uses oxygen-blown technology and converts the dried biomass waste into a synthesis gas containing carbon monoxide, hydrogen and carbon dioxide gases.

When the feedstock is exposed to heat, more drying occurs and pyrolysis gas is created and mixed with more oxygen that creates more heat.

The high temperature and residence time turns the pyrolysis gases into CO, H₂ and CO₂ gases. A reducing environment keeps dioxins and furans from forming and negative pressure prevents the escape of

gases.

From there, the syngas goes through heat recovery exchangers where the heat is captured as high pressure steam to generate power.

After cooling, the gas goes through a dry scrubber and a water quench before entering the fermentation stage.

Called the heart of the process technology, fermentation involves introducing the syngas to naturally occurring bacteria and agitation at low temperature and pressure to produce ethanol at the much faster rate. Since the bacterium is anaerobic, it dies when exposed to oxygen and creates no threat to people, animals or the environment.

In step five, the fermented liquid is extracted, filtered, distilled and purified so that it can be blended for use in cars.

One portion of the water used is recycled and the other portion is treated at a wastewater treatment plant.

In the final step, heat captured from the syngas or vent gas from fermentation in the form of steam turns a steam turbine to generate electricity.

"There are a lot of technologies that are making biofuels or power, but this is one of the only ones that does both at once," Cummings said.

The project is a joint venture of INEOS New Plant BioEnergy, a partnership between INEOS Bio, which commercializes and licenses its thermo-chemical and biochemical technology, and New Planet Energy, a project development company engaged in the development and implementation of advanced biofuels and energy products.

The plant has gone through extensive environmental permitting and assessment due to the novelty of its technology and its use of federal funding.

Back in December 2009, the U.S. Department of Energy awarded the project a \$50-million grant and then last summer the U.S. Department of Agriculture provided \$75 million in private financing under its loan guarantee program.

The project was the first large-scale bioenergy project in the country to finalize this funding under the USDA program and one of the first to meet the renewable fuel standard for the U.S. Environmental Protection Agency and certify the feedstock in the category that exceeds 60 percent greenhouse gas savings.

Getting gallons of this type of ethanol into the fuel supply is long anticipated by the U.S. Environmental Protection Agency, Cummings said.

The use of bioethanol as a road transport fuel will cut greenhouse emission 90 percent compared to gasoline, according

to company literature.

In addition to seeking to license the technology throughout the U.S. and other countries, INEOS Bio is interested in producing biochemicals as well as fuel, which could be an emerging trend in the next few years, according to a statement from Peter Williams, the company's CEO.

Lawton "Bud" Chiles, CEO of Renewable Energy Strategies, recently urged Orlando officials to consider a similar facility to reduce more than a million tons of municipal solid waste generated per year.

"Bio-fuels processing plants create significant opportunities for municipal gov-

ernments to turn their waste management expense into a revenue source through lower tipping fees, reduced costs of fleet fuels by substituting green fuels, reduced electric costs, etc.," Chiles wrote in a prepared statement.

"In addition, there are opportunities for local governments to share in revenues from producing biofuels and power and even to utilize bio-power to run electric fleet vehicles," he wrote.

The project is expected to create 380 direct and indirect jobs over the next several years as it is built and 50 full-time jobs once it is fully operational.



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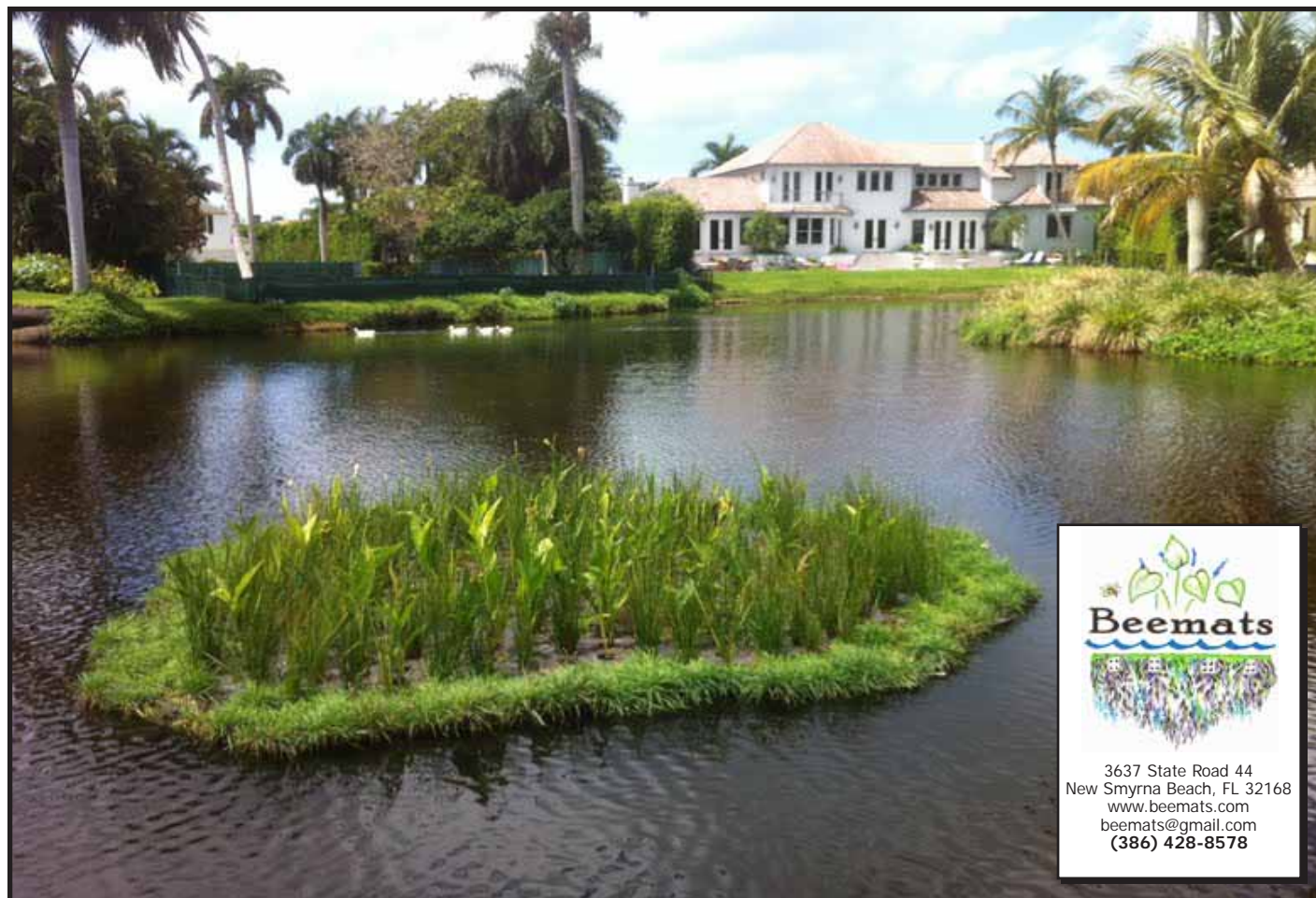
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DEP moving forward with cleanup of DeLeon Springs contamination

By PRAKASH GANDHI

State environmental officials say they are working diligently to clean up contaminated property in DeLeon Springs that has been at the center of controversy for years.

The Florida Department of Environmental Protection has been working on various stages of the assessment and cleanup process since leaking underground petroleum storage tanks were replaced at the gas station.

The latest effort, which started in Feb-

ruary, is the second part of a four-phase, \$8 million project by the DEP aimed at removing gasoline-contaminated soil from the site.

Underground storage tanks were upgraded at the gas station that is now a Valero, east of property owned by Cezar Perez.

According to a December 2005 report to DEP by Universal Solutions Inc. of Tampa, the new tanks were not properly sealed when installed and continued to leak after installation.

Universal Solutions was hired three

years ago and collected \$3.5 million to carry out the first phase of remediation, excavating an area east of U.S. 17 on the Valero gas station property.

In the spring of 2009, Universal Solutions oversaw the removal of about 15,000 tons of petroleum contaminated soil from the station property, said DEP spokeswoman Christine Daniel.

The first phase of the cleanup was initiated in March for the off-site petroleum contamination on the adjacent Perez property.

The petroleum cleanup activity for this phase involves the removal of petroleum contaminated soil using a large diameter auger.

Daniel said contractors are removing almost 15,000 tons of petroleum contaminated soil using the auger. The boreholes are filled with a flowable fill/concrete mixture.

To date, 146 auger borings of a total of 299 planned for the Perez property have been completed. Daniel said it is estimated that the borings will be completed by mid-June.

Then, officials will start resurfacing the source removal area.

Monitoring wells will be installed later to monitor the groundwater, Daniel said.

Petroleum contaminated soil remains within the roadway of U.S. 17 and will be removed using the same auger approach. The work will be phased to allow traffic flow on the highway to continue.

Daniel said the third phase of the cleanup is expected to start in 2013 with the fourth phase following in 2014.

"The department is continuing to monitor the groundwater in this area and has asked Universal Solutions to collect groundwater samples from monitoring wells installed for this purpose," she said.

"The petroleum contaminated groundwater plume is stable and the contaminant levels have decreased since the source removal was conducted on the Valero property," she said.

DEP has 23 monitoring wells in the area, including where the first phase of cleanup was done in 2009.

Perez said he believes that DEP is cleaning up only the soil in his parking lot, and that contaminated soil under his structure will remain.

Nearby residents have also voiced concerns about the effectiveness of the cleanup efforts.

Recent reports indicated there is still some contamination where Universal Solutions carried out Phase 1 of the cleanup.

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Federal agencies reviewing status of controversial dam on Ocklawaha

By BLANCHE HARDY, PG

The U.S. Forest Service and the Department of Agriculture, in consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service, have decided to review issues related to the removal of a portion of the Kirkpatrick Dam, also known as the Rodman Dam, on the Ocklawaha River.

The dam was created in 1968 as part of the now defunct Cross Florida Barge Canal project.

Removing the previously approved portion of the dam will result in the restoration of the Ocklawaha River through permanent discharge of the waters impounded in the 16-mile-long Rodman Reservoir.

Attorney Jay McWhirter's April 2012 letter on behalf of the Forest Service and Department of Agriculture provided notice of the agencies' proposed action.

The letter was written in response to Earthjustice's February 2012 filing of a 60-day notice of intent to sue the federal government for violating the Endangered Species Act. Manatee and shortnose sturgeon are highlighted in that notice of in-

tent.

David Guest, managing attorney for the Florida Office of Earthjustice, filed the notice on behalf of Florida Defenders of the Environment and the Florida Wildlife Federation.

Guest said there was a change in circumstances as the state had not removed the dam per its previous permit. They believe, and appear assured, that the state will go through with its commitment to remove the dam.

The U.S. Army Corps of Engineers transferred ownership of the dam to the state of Florida in 1991. As portions of the dam and reservoir lie within the Ocala National Forest, the state was subsequently required to obtain a special use permit to operate the dam on National Forest lands.

The Forest Service issued the initial five-year permit to the Florida Department of Environmental Protection in January of 1994, calling for the removal of all structures and improvements to restore the site.

The permit expired in 1999 but has been extended twice to give the state more time to complete environmental analyses and develop an acceptable management scheme to meet the conditions of the permit.

Because operation of the dam impacts several endangered species, both state and federal agencies completed assessments under the Endangered Species Act. As part of associated permit negotiations, DEP agreed to partially restore the Ocklawaha River.

Based on the proposed restoration of the river, the involved federal agencies concluded that the endangered species present would not be adversely affected. The Forest Service subsequently presented special use permits to DEP in 2002 and 2010.

On both occasions, DEP returned the permits unsigned indicating its inability to meet the permits' terms and conditions. Funding for permit execution was never allocated to DEP.

In short, Florida has not had a permit to operate the dam on federal land for over a decade.

The dam still exists, the Ocklawaha River has not been restored and potential impacts to endangered species migration is as yet unmitigated.

While advocates for the restoration of the Ocklawaha have tirelessly supported removal of the 44-year-old Kirkpatrick Dam, special interest groups have managed to repeatedly stop funding for the project in order to preserve fishing and recreational activities on the reservoir.

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Cockroach Bay restoration effort produces ecologic, economic benefits

BY SUSAN TELFORD

Cockroach Bay, located just south of Tampa Bay and part of Florida's largest open estuary, is on the rebound.

The Cockroach Bay Restoration Project represents one of the largest and most complex coastal restorations ever developed for the Tampa Bay area.

Purchased by Hillsborough County for \$2.1 million in 1991, the 651-acre tract is now an international model of restoration success.

The county and the Southwest Florida Water Management District coordinated the project, but it was the combined effort of public and private businesses, and a team of dedicated volunteers that made the project what it is today.

"We were able to restore a total of 500 acres of various coastal habitats," said Dr. Brandt Henningsen, chief environmental scientist in the Surface Water Improvement

Program at SWFWMD.

"We now have 282 acres of estuarine/freshwater wetlands and 218 acres of coastal uplands," he said.

The project was divided into two phases. The first phase developed the estuarine habitats through modification of three mining pits and adjacent agricultural lands, and construction of stormwater treatment systems.

During the second phase, 300 acres of upland and freshwater, transitional and high marsh habitats were restored. Over 176 tons of solid waste were removed from the site during the course of the project.

More than 500,000 cubic yards of dredged materials were used to restore the site, and over 2,500 volunteers helped plant trees and grasses as part of the restoration.

"We removed debris from over 151 acres. Once we cleared out the exotics, many things were able to naturally recruit in the restoration footprint," said Henningsen.

Seagrass beds, the foundation of a healthy estuary, are covering more areas in the bay than they have since the 1950s. Seagrasses form the basis of a food chain that impacts almost every underwater creature and provide protective nurseries and food source for many endangered species.

Thousands of acres of seagrass beds were destroyed by development during the 1950s that turned shallow coastal areas into high and dry waterfront communities with deep canals around the Tampa Bay area.

At the same time, the region grew exponentially, nearly tripling in size. With growth came increasing levels of pollution, and soon the seagrass beds around the bay area had virtually disappeared.

The new growth of lush seagrass beds in Cockroach Bay is beneficial to the environment for all of the ecological reasons, but the seagrass also positively impacts the economy. The Florida Department of Environmental Protection reported that in 2000, Florida's seagrass communities supported commercial harvests of fish and shellfish valued at over \$124 billion.

When you add the economic value of the nutrient cycling function of seagrasses for water quality and the value of recreational fisheries to this number, each acre

of seagrass has an economic value of approximately \$20,500 per year, according to the DEP, which translates into a statewide economic benefit of \$55.4 billion annually.

Cockroach Bay has other valuable environmental assets besides good water quality and meadows of lush seagrasses. The Leisey Shell Pits at Cockroach Bay, an area where historic fossils were discovered during the 1980s, was neatly integrated into the restoration project for educational purposes.

Called one of the richest ice-age sites in the world, avocational paleontologist and fossil hunter Frank Garcia with the University of Florida and 175 volunteers carefully unearthed beautifully preserved bones of a giant beaver nearly eight feet tall, an extinct condor with a twelve-foot wing span, llamas, horses and great white sharks from the pits.

"The original mouth of the Little Manatee River migrated north," said Henningsen, regarding the unusual combination of fossils that were discovered by Garcia during the late 1980s dig. "The reason that so many different species of mammals were mixed together was because the pit became a wash-down area of sand and shell deposits from the migration."

St. Johns River, ACF basin named to national list of Great Waters

By PRAKASH GANDHI

Two Florida waterways could receive increased federal and state funding for restoration projects after being designated as "Great Waters" by an alliance of national, regional, state and local organizations.

The American Great Waters Coalition added the St. Johns River and the Apalachicola-Chattahoochee-Flint River basin to its list of Great Waters. The designation is aimed at increasing national awareness of those waterways.

St. Johns River advocates are hoping the recognition will translate into a better chance to get federal funding for environmental protection projects.

"We are very happy about this designation," said Manley Fuller, president of the Florida Wildlife Federation. "We wanted to elevate these two river systems to a national audience and we believe this designation will help accomplish that."

He said both river systems have had to deal with major environmental challenges. "Both systems have incredible natural values and both have had significant stresses on them," he said.

The St. Johns River has been plagued by algal blooms from high nitrogen and phosphorus loads from wastewater treatment plants, discharges from farms and dairy operations, and stormwater runoff.

The St. Johns River Water Management District identified a list of potential resto-

ration projects and the 2012-13 state budget included \$5.6 million for implementing some of the projects.

St. Johns River advocates have been trying to control nutrients that help trigger fish kills. State rules require lower nutrient levels in many parts of the river.

The Apalachicola-Chattahoochee-Flint River system covers 19,600 square miles from the Appalachian Mountains in North Georgia to the Gulf of Mexico.

"The Apalachicola-Chattahoochee-Flint system has been the subject of intense litigation between Georgia, Alabama and Florida going back many years," Fuller said.

The river system faces competing uses of water between the growing metro Atlanta area and its downstream neighbors while the Apalachicola River in Florida has been hit hard by channel dredging.

"Our goals are to ensure that there are ecologically sustainable flows in the system. There are tremendous issues of conservation and water use in the ACF system and some of those same issues apply to the St. Johns," Fuller said.

He said the designation will ultimately bring additional resources to the two systems. "Obviously, a lot of work has to be done at the state and regional level," he said. "People in Florida care about water and we are going to use this designation to help bring additional resources to benefit these rivers both for their own sakes and for human enjoyment."

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Achieving Florida's 75 percent recycling goal is within our reach

By JORGE R. CASPARY, PG

For decades, the state of Florida has recognized that recycling is an important part of protecting Florida's environment and economy. In 1988, the Florida Legislature set a 30 percent recycling goal for each county.

Then, in 2008, the legislature established an ambitious statewide goal of recycling 75 percent of our waste by 2020 and applied that goal to individual counties in 2010.

Over the last decade, the statewide recycling rate has fluctuated between 26 and 30 percent, with a statewide recycling rate of 31 percent for 2010. Currently, 25 of 67 counties have reached the 30 percent goal set in 1988.

The Florida Department of Environmental Protection is committed to promoting recycling and providing technical assistance to local governments, organizations and residents to increase recycling and achieve the statewide recycling goal.

Achieving the 75 percent goal won't be easy, but it's entirely possible if we work together and focus on a few

key strategies.

First, all communities need to increase the collection of recyclable materials. Since two-thirds of Florida's municipal waste is generated by the commercial sector (business offices, schools, institutions), many communities are successfully increasing recycling rates by focusing on that sector.

For example, Alachua County, which has had a mandatory commercial recycling ordinance in effect for many years, reports a 65 percent recycling rate for the commercial sector, compared to the statewide average of 35 percent.

In many cases, businesses can actually save money by recycling. However, because waste management costs are typically a small part of their operating budgets, businesses have limited incentive to explore recycling. Local governments can help increase commercial recycling rates through public education, assistance and incentives.

For both the commercial and residential sectors, increasing the recycling of construction and debris materials will play an important role in achieving the 75 percent

goal.

Before the economic slowdown in 2008, construction and debris materials accounted for approximately 25 percent of Florida's municipal solid waste. During the recession, the recycling rate for these materials was only 22 percent, but grew to 28 percent in 2010.

While this is great progress, the recycling rate needs to continue to grow to achieve Florida's 75 percent goal. This will be especially important in the northern part of the state, where construction recycling rates are lower due to inexpensive alternate disposal fees.

The second key strategy is recognizing and accounting for additional recycled materials that have not counted toward the recycling rate in the past.

For example, the 2012 legislature made Florida the first state in the nation to count the creation of electricity from waste-to-energy and landfill gas operations toward the recycling goal. Because Florida burns more municipal solid waste than any other state, we expect this to be a significant change.

Of the 27 million tons of municipal solid waste generated in Florida in 2010, 55 percent was placed in landfills, 31 percent was recycled and 14 percent was combusted.

DEP is also working to address other materials that may not have counted toward the recycling goal in the past by revising sections of the Florida Administrative Code. DEP is currently considering revisions that would include counting all recycled construction and debris materials, shredded automobiles and some limited use of fill material. DEP expects to finalize the rule mid-summer 2012.

A crucial part of achieving these strategies and the overall 75 percent goal is recognizing that an increase in recycling rates depends on both the demand and markets for recycled materials.

This is why our third key strategy is increasing the demand and markets for recycled materials. DEP's Recycling Business Assistance Center promotes recycling-related business opportunities by monitoring and reporting progress to the Legislature, functioning as a resource for technical information and cross-pollinating information to promote the development of ideas.

Achieving a 75 percent recycling rate statewide is within our reach. Our ability to achieve our recycling goal by 2020 will require vision, leadership and the development of new markets over the next eight years.

Jorge Caspary, PG, is the director of the Florida Department of Environmental Protection's Division of Waste Management in Tallahassee.

Florida's VCTC incentive remains strong as DEP approves record number of credits

By JASON S. LICHTSTEIN, ESQ

The Florida brownfield program's key incentive is as strong as ever and continues to provide a welcome boost to Florida's redevelopment sector.

This year, the Florida Department of Environmental Protection approved \$6.2 million in Voluntary Cleanup Tax Credit awards for 2011 calendar year applications, the highest single-year total awarded in the program's history.

For the 2011 calendar year, 52 VCTC applications were submitted, 42 of which were for brownfield sites and 10 for drycleaner sites. Since 2008-2009, the number of VCTC applications has remained remarkably steady, with 52 applications submitted in three of the past four years and 55 submitted in the other year.

While there is a two-year backlog on VCTC credits, which DEP has approved but not yet issued pending annual state appropriations, participation and interest in the VCTC program remains robust.

Florida's VCTC program was aided by the increase last year in VCTC funding from \$2 million to \$5 million per year, a key legislative acknowledgment of the program's success in encouraging brownfield cleanup, redevelopment and job creation.

The VCTC program, enacted in 1998, provides a 50 percent state tax credit on eligible environmental costs incurred and paid on brownfield sites and certain drycleaner sites—up to a maximum \$500,000 annual award. Over the VCTC program's life, DEP has approved approximately \$33 million in VCTC credits.

Affordable housing, health care facility and end-of-cleanup VCTC bonuses are also available, in addition to the annual VCTC award. The affordable housing and health care bonuses are taking time to gain traction but we expect to see more in the near future.

Based on 42 brownfield VCTC applications and 120 active Brownfield Site Rehabilitation Agreements that could have been eligible to apply for the 2011 year (not yet closed out or out of the program), VCTC applications were submitted on 35 percent of those active BSRA sites. This includes BSRAs executed since 1998, when the first BSRA was signed. If you look at just BSRAs executed more recently, that should reflect an even higher level of VCTC participation.

The VCTC backlog stands at about \$13.6 million in approved but yet unissued VCTC credits. After July 1, 2012, when the new state fiscal year begins, DEP will issue \$5 million in VCTC certificates, reducing this backlog down to \$8.6 million.

Most VCTC tax credits approved this year will be issued in July 2014, pending continued (and expected) state VCTC funding.

DEP has approved \$2.15 million in end-of-cleanup VCTC bonuses, nearly all of which (\$2 million) have been approved based on the enhanced 25 percent bonus, which was increased from 10 percent in 2006. A 25 percent VCTC bonus is available on previously approved VCTC costs, up to a \$500,000 maximum award, following the issuance of a Site Rehabilitation Completion Order or a No Further Action. To date, 22 end-of-cleanup VCTC bonuses have been approved.

Interestingly, no affordable housing VCTC bonus applications have been submitted yet to DEP. Brownfields under BSRAs with new affordable housing are eligible for a one-time 25 percent VCTC bonus, up to a \$500,000 maximum award.

With an attractive, robust range of incentives available to affordable housing developers—VCTC tax credits and the state sales tax refund on building materials

LICHTSTEIN
Continued on Page 16

Adena Springs Ranch a threat to Silver Springs, Silver River flows, water quality

By JIMMY ORTH

How is it that we could allow such an iconic and beloved natural treasure as Silver Springs to degrade so significantly?

Over the last several decades, this National Natural Landmark has suffered from dramatic increases in nutrient pollution and declines in its flow, partly due to excessive groundwater withdrawals, poorly treated wastewater and excessive use of fertilizer.

Silver Springs is one of our most famous natural resources, attracting millions of people to Florida over the last century and half. According to a 2004 study, Silver Springs supports over 1,000 jobs and has an annual economic impact of over \$61 million. It also provides a window into our aquifer and is an important source of fresh, clean water for the St. Johns River system.

This first magnitude spring flows from the aquifer into the Silver River (an Outstanding Florida Water) before converging with the Ocklawaha River (a State Aquatic Preserve and Outstanding Florida Water), the largest tributary of the St. Johns River (an American Heritage River). Despite the impressive list of designations that signify their importance, all of these bodies of water are suffering from problems related to pollution and flow rates.

Now, a large-scale cattle operation and slaughterhouse located in the springshed of Silver Springs is seeking a permit to withdraw over 13 million gallons of water a day from the aquifer. This is more water than is used by the entire city of Ocala.

The Adena Springs Ranch would include up to 30,000 head of cattle in an area prone to runoff and leaching of nutrients and pollutants. Due to the likelihood of nutrients reaching the groundwater, Silver Springs and the Silver River, this is simply the wrong place for this type and size of cattle operation. Considering the significant decline in flows already documented for area springs and rivers, the permit request should be denied.

However, this is about much more than just Silver Springs. This is an effort to stop the bleeding and to es-

establish a more protective water management system that prioritizes restoration and conservation.

What is happening to Silver Springs is emblematic of the water quality and supply challenges we are facing throughout Florida, highlighting the significant pollution problems that exist and the impending water crisis that we face. As a result, this is a fight for all of Florida's rivers, lakes, springs and aquifers—not a fight against a Canadian rancher or his cattle.

This permit request brings into focus the interconnectedness of our groundwater, surface waters and lands within our watersheds and springsheds, and the need to focus on the cumulative impacts of our actions.

We are challenged to consider the highest and best use of the waters that we, the public, collectively own and entrust to our agencies to manage on our behalf. We are forced to acknowledge the limits of our water resources and the potential consequences of exploiting our aquifer and polluting our surface waters. We are exposed to the shortcomings of our environmental safeguards and the need to reevaluate what is in the public interest, what is a "reasonable beneficial use," and what determines "significant harm."

We simply cannot continue to justify issuing permits for massive withdrawals from the aquifer when 97 percent of the St. Johns River watershed has been determined to be facing water shortages. We can't risk adding more nutrients to waterways that are already polluted. We should be focused on restoring the health of our impaired waters instead of considering permits that could cause further harm.

We must also give serious consideration to what we value and what we are willing to sacrifice. If we can't save Silver Springs—of all places—then what can we save and what is worth protecting?

Finally, this permit shines a spotlight on the critical need to prioritize and focus our efforts on water conser-

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Florida
Specifier

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Michael R. Eastman
Publisher/Editor
Goldenrod, FL
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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

June

June 4—Course: Backflow Prevention Recertification Review, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 4—Workshop: Florida Brownfields Redevelopment Workshop, Alachua, FL. Hosted by the Brownfields Communities Network in association with the National Association of Local Government Environmental Professionals. Visit www.nalgep.org.

June 5—Course: Backflow Prevention Recertification Exam, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 5-6—Course: Pumping Systems Operation and Maintenance, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 6-8—Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 7—Course: Backflow Prevention Recertification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 7—Course: Unidirectional Flushing Techniques, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 7-8—Workshop: 2012 Water Facility State Revolving Fund Workshop, Orlando, FL. Presented by the Florida Engineering Society. Call (850) 224-4349 or visit www.fleng.org.

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

June 8-16—Course: Backflow Prevention Assembly Tester Training and Certification, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

June 11-13—Course: Asbestos: Inspector, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 13-15—Conference: 2012 FAWQC Annual Conference: The Color of Water, Naples, FL. Presented by the Florida Association for Water Quality Control. Call (813) 623-6646 or visit www.fawqc.com.

June 13-15—Conference: 2012 Florida Stormwater Association Annual Conference, Fort Myers, FL.

ORTH From Page 10

vation and the reduction of nutrient pollution in Florida.

If we continue our wasteful water use practices, our aquifer, springs and rivers will continue to be threatened by over-pumping and surface water withdrawals. If we don't get serious about reducing nutrient pollution, our waterways will continue to be polluted by poorly treated wastewater, fertilizer runoff and failing septic tanks.

We can look at Silver Springs as a crossroads or a line in the sand. Either way, this is a pivotal event that will help shape the future of Florida's water resources.

Can Florida's existing water laws and regulations adequately protect our waterways? Do we continue with business as usual or do we choose a more sustainable path?

We simply cannot afford to continue to sacrifice our valuable water resources for the politics of the moment and the fortunes of a few. After all, water is the lifeblood of Florida's economy and essential to our health and quality of life. So maybe, just maybe, our salvation is in Silver Springs.

By saving and restoring this iconic spring system, we may actually demonstrate the resolve and find the keys to protecting and restoring all of Florida's imperiled waterways.

Jimmy Orth is the executive director of St. Johns Riverkeeper in Jacksonville. He can be reached at jimmy@stjohnsriverkeeper.org.

Call 1-888-221-3124 or visit www.florida-stormwater.org.

June 14—Course: Lead: Renovation, Repair & Painting, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 14-15—Course: Asbestos: Management Planner, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 18—Course: Introduction to Backflow Prevention, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 18-21—Conference: 23rd Annual Conference of the Florida Lake Management Society, Gainesville, FL. Contact Martann Krisovitch at flms_home@aol.com or visit www.flms.net.

June 19-20—Course: Cross-Connection Control: Survey and Inspection, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 19-22—Course: Water Class C Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 19-22—Conference: Air & Waste Management Association's 105th Annual Conference, San Antonio, TX. Call 1-800-270-3444 or visit www.awma.org.

June 21-22—Course: Cross-Connection Control: Ordinance and Organization, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 22—Course: Backflow Prevention Recertification Review, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 23—Course: Backflow Prevention Recertification Exam, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 24-26—Conference: SWANA Florida's 2012 Summer Conference, Ponte Vedra Beach, FL. Presented by the Florida Chapter of the Solid Waste Association of North America. Call (727) 797-4234 or visit www.swanafl.org.

June 25-27—Course: Lead: Inspector, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 25-27—Conference: APWA's Fourth Annual Sustainability in Public Works Conference, Pittsburgh, PA. Presented by the American Public Works Association. Contact Juila Anastasio at janastasio@apwa.net or visit www.apwa.net.

June 26-28—Course: Train the Trainer: How to Design & Deliver Effective Training, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 28-29—Course: Lead: Risk Assessor, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

July

July 7—Course: Backflow Prevention Recertification Review, Bradenton, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

July 9-13—Course: Backflow Prevention Assembly Tester Training and Certification, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

July 10—Course: Unidirectional Flushing Techniques, Tamarac, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

July 11-12—Course: Water Reclamation & Treatment Processes, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

July 12—Course: Lift Station Maintenance, Pompano Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

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

July 12-21—Course: Backflow Prevention Assembly Tester Training and Certification, West Palm Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

July 13-21—Course: Backflow Prevention Assembly Tester Training and Certification, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

July 14—Course: Backflow Prevention Recertification Exam, Bradenton, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

July 16-19—Course: Lead: Supervisor/Contractor, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

July 16-20—Course: Backflow Prevention Assembly Tester Training and Certification, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

July 18—Course: 4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations, Winter Haven, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

July 18—Course: 8-Hour Training Course for Spotters at Landfills, C&D Sites and Transfer Stations, Winter Haven, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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Paynes Prairie wetlands restoration effort expected to get underway soon

Staff report

Restoration work is slated to begin soon on the 21,000-acre Paynes Prairie just south of Gainesville. Bids for the restoration effort were due by May 31.

Rick Hutton, supervising engineer for Gainesville Regional Utilities, said construction should start this summer with a spring, 2014, target date for completion.

The need for the project has been accelerating in recent years.

"In 2006, the state designated the Alachua Sink as a TMDL (total maximum daily

load) body of water," Hutton said.

Wastewater from GRU's Main Street Water Reclamation Facility is discharged into Sweetwater Branch and then flows into Paynes Prairie. It eventually reaches the Alachua Sink.

Because of the TMDL designation, all the nitrogen sources to the sink must be reduced. Hutton noted that Sweetwater Branch flows through some of the older urban parts of Gainesville that were built before modern stormwater regulations were enacted.

"That, too, is a source of nitrogen," said

Hutton. "And the city's utility has responsibility to reduce nitrogen flow from stormwater."

The largest part of the contract calls for earth-moving work.

"We are building a 125-acre wetland," he said. "We will be moving earth and building berms. It is not unlike the Everglades restoration going on in South Florida, only in smaller scale."

While smaller than the Everglades work, the project is nonetheless tricky. "You have Sweetwater Branch flowing through the middle of the project, so when they are constructing it, they have to accommodate the flows."

Seasonal changes can alter that rate of

flow. Hutton said in extremely dry weather, the flow may be reduced to 10 cubic feet per second, but when a big rainstorm hits, the flow can skyrocket to 2,000 cubic feet per second.

Once complete, the newly created wetland will filter the water flowing from Sweetwater Branch.

When work gets underway, one of the first projects will be to reverse an action taken in the 1930s when cattlemen dug a two-mile canal in the prairie to drain 1,300 acres of wetlands. That canal will be filled in as part of the project.

The project is funded through a combination of GRU rate-payer revenues, state and federal grants and a stormwater fee.

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NOTES

From Page 3

The company lost its permit after residents complained about odors emanating from the plant. They insist that county officials told them that the permit's definition of composting included the processing of sludge.

Biodiesel in Santa Rosa. Agri-Source Fuels Inc. is close to bringing a biodiesel plant to Santa Rosa County on property belonging to Sterling Fibers.

Agri-Source was originally awarded \$4 million in a commercial project grant to construct a \$21 million plant in Pensacola.

But in March, the company made a request with the Florida Department of Agriculture and Consumer Services to change the location of the plant. They said the Santa Rosa County site will allow larger production volumes and make better use of existing infrastructure.

In 2007, Agri-Source retrofitted a closed orange juice processing plant in Dade City, which is now processing over 20 million gallons of biodiesel annually.

Phase 1 of Agri-Source's plan called for 20 million gallons of biodiesel to be processed each year. With the amended contract, the company is looking to raise that number to 30 million gallons a year.

The \$4 million grant was part of \$25 million in renewable energy grants funded by the Florida Legislature in 2007.

Fort Meade biomass. U.S. Ecogen, an energy company headquartered in Potomac, MD, plans to build a \$240-million biomass energy plant north of Fort Meade on U.S. 17 near Progress Energy's Hines Energy Complex.

The plant will burn wood chips from a variety of eucalyptus trees that the company plans to grow on plantations in Florida.

Ecogen expects to sell power to Progress Energy, which has about 89,000 customers in Polk County.

The company plans to form a subsidiary to run and operate the plant. The project will employ 350 people to build the plant over two years, 35 people to operate the plant for 30 years or more and 55 people to grow, harvest and deliver the fuel for the plant.

The Central Florida Development Council has estimated the annual economic impact to Polk County at \$11 million.

Champion of change. Cynthia Barber, director of the city of Tallahassee's Environmental Policy and Energy Resources Department, was honored in April as one of nine "Champions of Change" for leadership in sustainability and environmental policy efforts.

Barber was recognized for her use of innovative approaches that promote green initiatives such as energy efficiency, alternative transportation, revitalizing outdoor spaces and sustainability programs.

People news. Attorney Deborah Getzoff, former director of the Florida Department of Environmental Protection's Southwest District office, has been hired by Lewis, Longman & Walker PA, a law firm specializing in government and environmental issues. Getzoff will work out of the firm's Bradenton office.

Former Polk County Manager Robert Michael Herr is Tampa's new administrator of public works and utility services. Herr replaces Steve Daignault, who retired in February. He will oversee solid waste, water, wastewater, public works and contract administration.

Clayton Lee, PE, has rejoined Bowyer-Singleton in its transportation department as manager of drainage design. He worked there from 1988 to 1992 as a drainage engineer. He has more than 28 years of experience in drainage design and analysis, roadway design and other areas.

Susan Manson, PE, has joined McKim & Creed's Daytona Beach office as a senior project manager.

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Expert panel suggests changes in deep sea oil well risk assessments

By ROY LAUGHLIN

An expert panel recently published a critique in a peer-reviewed journal describing deficiencies in currently used Natural Resource Damage Assessments for deep-sea oil and gas extraction activities.

Their discussion may be broadly divided into two main subject areas: 1) Existing NRDA models are based on near-shore and shallow water experience that is no longer adequate as oil exploration and extraction moves into deep seas offshore; and 2) the science base for supporting risk assessment and damage assessment in deep waters is too limited to build substantial confidence in its utility.

The Deepwater Horizon oil spill was the case study used to support most of the conclusions regarding limitations and failures of current U.S. policies germane to deep-sea petroleum exploitation.

The science describing environmental effects of floating and stranded oil is well characterized, and according to the authors, largely guided the response to the Deep Horizon disaster. They refer to this as the "old model."

Their criticism is that at least an equal amount of hydrocarbon dispersion (with dispersant use) occurred in waters below 1000 meters and on the deep ocean bottom. But far less attention, according to the authors, has been given to its biological effects and factored, consequently, into the Deepwater Horizon's NRDA.

Use of 0.77 million gallons of dispersant at the wellhead was an unprecedented introduction of chemicals into the deep-sea whose toxicity to indigenous organisms there had not been characterized at all.

The government's decision to use dispersants in the deep-sea was based on two bioassay series of near-shore shallow water species, and received due criticism by

the researchers.

They criticized even more pointedly the lost opportunity to characterize the fate and effects of petroleum hydrocarbons in deep waters as the blowout was releasing oil. The formation of the substantial deep water plume, and its surprisingly rapid assimilation by deep water microorganisms still leaves a substantially huge black box of potential environmental effects on ecosystem processes, food chain accumulation and perhaps adverse biological effects on both ecologically important species and protected species.

The researchers broke new ground in discussing the relationship between the failure of existing programs to provide adequate financial and logistical support to characterize oil and dispersants used in deep water on off-shore biological resources and ecosystem processes. This failure, according to the article's authors, detrimentally influences NRDA in two substantial ways that diminish stewardship of public resources in the deep sea.

The first may limit the government's case to recover losses for those resources under NRDA. The second, and perhaps more important, is that the unanticipated misfortune created unique research opportunities that cannot be replicated experimentally for future NRDA support.

"NRDA it is not a scientific endeavor but, rather, a legally driven process that employs science as the vehicle to achieve the quantification of injury and to obtain funds for compensatory restoration," they wrote in attempting to establish a new nexus between laws and public policies, and adequate support for scientific activities on which these are based.

In the 1980s, when requirements for NRDA were written, the science base for shallow water and coastal ecosystems was much more extensive than is the case for open ocean and deep water ecosystems to-

ing capability and control during last year's session.

This year some of that control and financial freedom was restored with SB 1986, which repealed the spending limits.

The legislature removed the property tax limits, while retaining control for setting millage rates and the ability to reject preliminary budget proposals, said Lori Killinger, a shareholder and head of the legislative practice in the Tallahassee office of Lewis, Longman & Walker PA.

"(Last year) they wanted to gain control and did," she said. "They spent a year analyzing that and it appears they thought they went a little too far."

While the bill does not remove legislative influence, it removes legislative command and control and micro-management, placing most of the oversight back under the governor, according to a summary written by Estus Whitfield on the Florida Conservation Coalition website.

"We didn't achieve total victory, but we gained a lot of ground," wrote Whitfield, a former environmental advisor to five Florida governors and a member of the FCC, which would like to see the districts remain more independent from state control.

A lot of the other environmental bills passed dealt with issues such as environmental streamlining, reclaimed water and mitigation banking, Killinger said.

"But I didn't feel like the environmental issues were front and center in the budget," she said.

In terms of the environment, the focus was more on permitting and trying to reduce red tape. Examples include HB 503 and an ERP initiative, which were all about streamlined permitting and regulatory aspects needed to increase consistency and efficiency.

Killinger said she wasn't surprised that Scott vetoed \$19 million in local water projects and numerous road projects.

Some of the few survivors included \$10 million for beach restoration projects, \$5.6 million for St. Johns River restoration, \$4.8 million for Lake Apopka, and \$1.25 million for flood prevention in Port Orange.

day. The authors note that extensive scientific research is not part of the mission of NRDA-driven damage assessment studies. For that reason, among others, the unique opportunities the deep-sea horizon blowout offered went largely unavailed.

The report suggests that whatever opportunities still remain could be addressed using restoration settlement funds because the completion of compensatory restoration of the deep sea damages is impossible without first knowing the extent of those damages. Additional funds from Congress have been requested but Congress has repeatedly failed to deliver sufficient financial support in the past, they note.

The report is not only a plea for more funding for science-based inquiry that will shed light on deep sea resources and ecological processes adversely affected by petroleum extraction, with or without a disaster—it's a call for legislative changes.

Recommendations are that new science be pursued and that legislation requires its application to ecological risk reductions during deep sea and blue water petroleum extractions.

Editor's note: The report, "A Tale of Two Spills: Novel Science and Policy Implications of an Emerging New Oil Spill Model," was published in Biosciences, May, 2012.

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Natural products may be viable alternatives to chemical oil dispersants

By ROY LAUGHLIN

During the Deepwater Horizon oil spill, more than 1,700,000 gallons of Corexit dispersant was used. Environmental advocates were concerned that the use of oil dispersant would create its own disaster, and the debate about what to do next time has continued since the well was capped in August, 2010.

Natural products are touted as one alternative with great promise. As natural products, they are seen as more compatible with living organisms in the sea than harsh chemical dispersants.

Florida researchers have been part of

this search. Dr. Norma Alcantar, associate professor at the College of Engineering at the University of South Florida, and her research team recently described the use of prickly pear cactus mucilage as an oil absorbent.

In published accounts of her work, Alcantar noted that cactus mucilage is used in Mexico as a low tech water purification agent in homes. Cactus leaves are boiled to extract the mucilage into water to be cleansed.

Alcantar found that mucilage can be extracted from cactus leaves and dried to a powder. Dried mucilage binds oil upon contact, dispersing the oil if the mucilage

particles are the right size. Mucilage is expected to act as a nutrition source for microbes that would enhance degradation rates of the emulsified oil.

Cactus mucilage is a member of the much larger category of hydrocolloids. As natural products, they are obtained from plants ranging from algae to gum trees and used widely in food and cosmetics.

The USF researchers' effort is one of the first to demonstrate that these plant mucilages are capable of binding oil in sea-

water at sufficiently high efficiencies to be a useful alternative to the use of synthetic chemicals.

So far, the group has performed only laboratory bench demonstrations of cactus mucilage's ability to bind oil. The next step is to test its behavior at the larger scale of an oil spill.

Oil spills will continue to occur. Perhaps natural products such as mucilages will become an effective substitute for chemical dispersants in the future.

Panhandle estuaries subject to new standards include the following bays: Perdido, Pensacola, Escambia, St. Andrews, St. Josephs, Choctawatchee and Apalachicola.

A new mercury TMDL is the final item on DEP's review agenda, not because the element is so chemically different from others included in human health review categories, but because so much new science has been developed over the past three years.

The new science resulted from cooperative studies supported by DEP and conducted jointly with DEP staff scientists, University of Michigan researchers and the U.S. Geological Survey. The result is a much better characterization of the link between atmospheric inorganic mercury vapor deposition, its microbial methylation in organic rich wetland sediments, and organomercury bioaccumulation through the aquatic food chains in both fresh and salt waters.

New mercury TMDLs may be substantially different from current ones given new information about mercury mobilization in Florida's aquatic ecosystems.

Acceptance of mercury's ubiquitous occurrence and cycling in aquatic ecosystems is the new normal propelling a revised standard that will ensure seafood consumption safety.

DEP held a series of rule development workshops in West Palm Beach, Orlando and Tallahassee in May to share and obtain information that will guide language in the first draft of proposed rules.

Bartlett said he hoped to have the new rules adopted by the end of 2012, except for the Panhandle numerical nutrient criteria, which are expected to be finalized by June 30, 2013.

comment in May. But officials have said the reservoir worked just fine and the cracking was only a cosmetic problem.

Experts retained by HDR determined that the unexpectedly large cracks were caused by a small amount of collapse in the underlying soil layer.

The company says on its website that the cracks appear to have stabilized through an on-going grouting repair program.

"All parties agree that the reservoir itself is safe and operational," says HDR on its site. "Nevertheless, TBW continues to waste taxpayer money by pursuing this protracted, costly litigation."

NEPAssist is available at <http://www.epa.gov/oecaerth/nepa/nepassist-map ping.html>.

Alternative energy production sites on contaminated lands. The EPA and the Department of Energy took another step toward increasing renewable energy when they jointly released a new set of documents described as decision trees to assist the development of alternative energy projects on contaminated lands, including brownfields and federal Superfund sites.

EPA estimates that as many as 15 million acres are potentially available nationwide for siting wind and photovoltaic generation facilities.

The newly released tools help local governments and planners identify the most effective and suitable uses for available lands.

These technologies are also useful on roof tops, parking lots and other under-utilized urban sites.

More information is available at <http://www.epa.gov/renewableenergyland/>.

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DEP

From Page 1

Contaminant uptake of the listed chemicals can also occur via drinking water, but that is less significant than bioaccumulation in food. Nevertheless, new standards may be revised for drinking water uptake also.

Any new standards developed could be wide ranging, including having a direct influence on remediation goals and standards. But it is water contaminant uptake via seafood consumption that guides this review cycle.

"We will be ratcheting down on amounts allowed in fish ... taking what we have now based on outdated fish consumption and using modern consumption data" to arrive at new standards, said Bartlett.

Dissolved oxygen standards are the second focus of the first review item. The effort will determine if there is need to modify, and how to modify, current standards to reflect dissolved oxygen's natural diurnal and seasonal oscillations in Florida's unique subtropical environment, said Bartlett.

The next item on DEP's agenda is establishing numeric nutrient standards for specific Panhandle estuaries. It follows the Florida Legislature's approval of court-mandated and EPA-accepted nutrient water criteria for many of Florida's estuaries.

That rule allows site-specific criteria backed by robust data, some of which were not available in time to include Panhandle estuaries in the larger set developed last year.

"We continue to pursue criteria, but it's filling in the gaps as science emerges," Bartlett said in explaining the later scheduling of numeric nutrient standards for Panhandle estuaries.

TBW

From Page 1

made their decision."

The board hired Kiewit Construction for \$162 million to both design the repair as well as expand the reservoir's capacity by three billion gallons.

The utility says it has incurred about \$106 million in legal fees to date on the project.

Utility officials have said expanding the reservoir still makes sense as a way to guarantee a ready supply of water during times of drought.

HDR officials could not be reached for

FEDFILE

From Page 3

When completely implemented, the EPA expects the new rules to reduce hydrocarbon emissions from fracking by 95 percent.

EPA releases NEPAssist. NEPAssist is a new web-based mapping tool intended to facilitate more efficient and effective environmental reviews and project planning by federal agencies.

In April, the EPA made it available for public use.

The mapping tool works on top of databases containing publicly available federal, state and local data sets. Each allows the public to obtain information about environmental conditions in an area of a proposed project during the early stages of the project.

Federal agencies use NEPAssist to identify alternative project locations, avoid and minimize impacts, and identify mitigation areas.

More information about and access to

New company plans to capture, bottle rain water in Ormond Beach

By ROY LAUGHLIN

Larry Curran had an idea that spawned both a business plan and a water conservation effort simultaneously. He plans to capture and sell rain water under the brand Choose Rain.

Curran asserts that collecting rainwater for bottling rather than "drilling for it" conserves aquifer water resources and the natural systems they nourish.

His plan, investors and regulators willing, is to build a rainwater collection, storage and bottling facility near Ormond Beach.

From a permitting perspective, bottling drinking water collected as rain is simpler than getting a consumptive use permit for bottling water from other sources. There is no consumptive use permit required.

But Curran said that he will need permits from the U.S. Environmental Protection Agency under the authority of the Safe Drinking Water Act. The federal rules focus primarily on water quality and the absence of microbial pathogens.

He plans to operate a Class A water treatment facility as the bottling plant. Rainwater to be bottled will be processed through a series of filters to 0.3 microns. In the collection tanks, it will be treated with ozone and ultraviolet light to control microbial growth.

The water will also have to be analyzed on a regular basis, particularly for E. coli, noted Curran. In addition, the bottled rainwater should contain less than 20 mg/L of total dissolved solids.

The Florida Department of Agricultural

and Consumer Services has purview over drinking water sold in bottles. The agency's level of oversight will be low, according to Curran.

DACS's rules focus on disclosures of additives such as flavors or preservatives. But since he is not using those, required disclosure on the label is minimal.

The business model for Choose Rain is complex and will depend on some local experience. Florida's rainfall frequency is seasonal and highly variable from year to year.

Curran says he will collect rain whenever it falls and store it in stainless steel cisterns until bottled. While in storage, it will be ozonated and treated with ultraviolet

light.

Choose Rain does not yet have an operating Florida bottling plant. The company is working closely with two similar companies in Texas that are operating: Texas Rain and Agana. Choose Rain's bottling plant's design, said Curran, is similar to theirs.

He intends to use biodegradable polyethylene terephthalate bottles that have an additive patented by Agana. The additive makes the plastic biodegradable in landfills.

The plant for collecting, storing and bottling water is expected to cost about \$1 million.

Curran came up with his plan after he

built a new home in Florida that featured a rainwater system that collected water from a 4500-square-foot roof to a 17,000-gallon cistern.

Friends and neighbors enjoyed drinking his rain water so much that he decided to commercialize bottled rainwater.

Curran views this as both an effective conservation practice, as well as a business opportunity because his source water will not be taken from any aquifer that supports a natural ecosystem.

Plus, serving a local market will minimize the use of transportation fuels in production.

The treatment requirements are also low intensity, and therefore low energy.

NOAA: Eight percent of U.S. marine waters protected

Staff report

A new analysis of updated data has shown that eight percent of U.S. waters are currently designated as marine protected areas, with the vast majority of these areas open to fishing and other activities, according to the National Oceanic and Atmospheric Administration.

U.S. sites are cataloged in the recently updated MPA Inventory, available online.

"These data show that the U.S. has a representative network of MPAs, both geographically and for different purposes. Eight percent is good progress," said Lauren Wenzel, acting director of the National Marine Protected Areas Center.

The eight percent figure does not include MPAs specifically established to sustain fisheries production, which often have specific restrictions on fishing gear over large ocean areas.

Other inventory analyses including these fishery MPAs, however, show that 92 percent of the area within U.S. MPAs allows some type of activity, and 85 percent is open to fishing.

The analysis also showed that more than two-thirds of all U.S. MPAs were created, at least in part, to conserve natural heritage values, such as biodiversity, ecosystems, or protected species.

About a quarter of the sites focus on sustainable production, such as those established to recover overfished stocks, protect species readily taken as bycatch, or preserve essential fish habitats, while the remaining approximately ten percent were established to conserve our nation's cultural heritage.

"The MPA inventory and mapping tool give both planners and the public an easy way to see the big picture of all the marine protected areas in our oceans and along our coasts," said David Kennedy, assistant NOAA administrator for the National Ocean Service.

"By including MPAs from all federal and state agencies, managers can better cooperate to protect shared resources, and the public can easily find their local MPAs and see the types of uses they allow," he said.

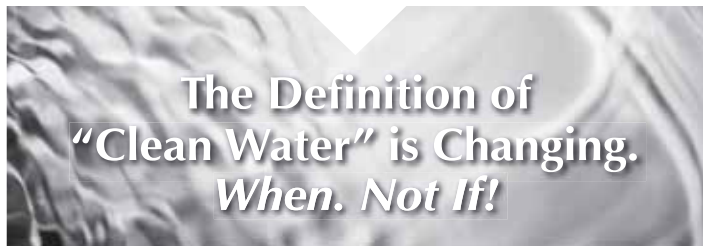
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purchased for affordable housing sites constructed within designated brownfield areas—we expect increased interest and activity in this VCTC bonus.

No health care facility VCTC bonus applications have been approved yet by DEP and just one has been submitted. Brownfields with a new health care facility or health care provider are eligible for a one-time 25 percent VCTC bonus, up to a maximum \$500,000 award. One health care bonus application was submitted in 2010, which DEP denied.

While there is some drycleaner participation in VCTC, it remains curiously low, especially in light of the opportunity for non-program drycleaner sites to secure VCTC credits.

Drycleaner site VCTC applications totaled only 10 this past year and 12 each of the three prior years. There is a substantial opportunity for increased participation, especially by drycleaning sites with a Voluntary Cleanup Agreement with DEP or contemplating a VCA.

There is little downside for non-program drycleaner sites to consider VCAs and also benefit from the VCTC incentive.

For a relatively modest state tax incentive, the state of Florida is enticing and leveraging a significant investment in the cleanup and redevelopment of brownfield sites.

While the VCTC program has a backlog, it remains a vibrant part of Florida's nationally recognized brownfield program.

Jason Lichtstein is a shareholder practicing environmental law, with a focus on brownfield and contaminated site cleanup and redevelopment, with Akerman Senterfitt in Tallahassee.

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August Special Focus:

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Each August, we turn our attention to the environmental laboratory business in Florida. As part of this special issue of the *Florida Specifier*, we include a directory of environmental labs providing services in the state.

You're invited to complete the form below, providing details about your lab and your analytical capabilities. **There is a fee of \$200 to list your lab this year.** (Fee waived for advertisers and FRC exhibitors.) In addition to your listing in the directory, your lab will also be included in a special lab section of our Enviro-Net Web site.

Please type or **LEGIBLY** print the information and return as soon as possible to Mike Eastman via fax at (407) 671-7757, e-mail mreast@enviro-net.com or mail to P.O. Box 2175, Goldenrod, FL 32733. You can reach us at (407) 671-7777. The deadline for submissions to the August Lab Directory is Friday, July 6, 2012. Note: If you were listed last year, we will be in touch. Do not complete this form.

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State of incorporation: _____ Years under same ownership: _____ years

Lab capabilities/specialties: _____

Sample types: _____

Certifications: _____

Additional services: _____

Number of years in business: _____ years

Staff: Total: _____ Engineers/scientists: _____ Technicians: _____

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