

Florida Specifier

Last Call for Abstracts



November 7-8, 2019
Omni Orlando Resort
at ChampionsGate

Practical Information For Environmental Professionals

Single Copy Price: \$5

June/July 2019

Volume 41, Number 3

State of the air 5

The American Lung Association released its 2019 State of the Air report, tracking Americans' exposure to unhealthy levels of ozone and particle pollution.

FPL cooling canals lawsuit 6

Environmental advocacy groups reached a tentative settlement with Florida Power & Light Co. on Clean Water Act disputes regarding the cooling canal system at FPL's Turkey Point nuclear power plant, Units 3 and 4.

Ultrasound for algae 10

LG Sonic has developed a buoy-mounted instrument platform that radiates sonic energy capable of killing algae cells. Company officials believe their technology can address algae bloom issues in Lake Okeechobee.

Red tide predictor? 13

USF researchers have conducted interdisciplinary studies over the past 15 years to shed light on the factors that cause red tide blooms and disperse the blooms across the Gulf of Mexico. Their work may lead to a model for predicting red tide outbreaks.

Solar partnership 15

The city of Kissimmee recently approved a partnership with the Kissimmee Utility Authority to power all its facilities with solar energy starting next year. The agreement allows the city the opportunity to secure a fixed energy rate for the next 20 years.

Departments

Calendar	11
Federal File	2
Florida Notes	3
Water Watch	4

Got a story lead?

Got an idea for a story? Like to submit a column for consideration? Fire when ready. 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 Florida. Send to P.O. Box 2175, Goldenrod, FL 32733. Call us at (407) 671-7777; fax us at (321) 972-8937, or email mreast@enviro-net.com.

Address label changes?

If your mailing label is inaccurate or incomplete, please contact us with the correct information at Post Office Box 2175, Goldenrod, FL 32733; fax (321) 972-8937; or e-mail mreast@enviro-net.com. We appreciate your help with keeping our circulation database accurate.

Presorted Standard
U.S. POSTAGE
PAID
ORLANDO, FL
PERMIT 1556

1906

Florida
Specifier
P.O. Box 2175
Goldenrod, FL 32733
CHANGE SERVICE REQUESTED



Photo courtesy of LG Sonic

LG Sonic staff and team prepare an MPC buoy, the firm's solar-powered floating platform that combines ultrasound technology and real-time water quality monitoring to help control algal blooms. This technology offers prospects to selectively control Florida's algal blooms without chemicals. See story on Page 10.

2019 Florida legislative session ends with mixed results for environment

By ROY LAUGHLIN

For the first time in a decade, there was some good news for the environment at the close of the annual Florida legislative session.

When then-gubernatorial Republican candidate Ron DeSantis promised to spend \$2.5 billion on the environment during his first term in office, some eyebrows were raised.

But he's off to good start delivering on that campaign pledge with legislative funding that will exceed his first year's goal of \$625 million, according to the Florida Department of Environmental Protection.

Follow the money

Lawmakers approved most of the governor's proposed environmental budget, highlighted by \$360 million for Everglades restoration, including \$107 million for the Everglades Agricultural Area Reservoir, a \$43 million increase over the requested appropriation.

Legislators also provided \$40 million to expeditiously complete raising the Tamiami Trail to allow more water flow from Water Conservation Area 3 to Everglades National Park. The project will increase water flow to the park to 900 million gallons a day.

DEP's Beach Management Funding Assistance Program will receive \$50 million to provide financial assistance to local governments and non-state entities for beach management. Some of this money is earmarked for Hurricane Michael recovery in the Panhandle.

Small county wastewater treatment plants were funded to the tune of \$13 million.

The reef restoration program in the Florida Keys will receive \$277,000, the specific use of which remains to be determined.

The state springs program will re-

ceive \$100 million, half of it from the state's Land Acquisition Trust Fund for fixed capital outlays. The governor originally asked for \$100 million.

Characterizing the budget in other terms, the Legislature provided \$150 million for "targeted water quality improvements" expected to be available for selected projects across the state that will reduce nutrient inputs and algal blooms. The Indian River Lagoon is expected to receive funding from this appropriation.

The Florida Forever program was authorized to spend up to \$33 million to buy and preserve land for conservation. This is far less than the 100 million that the governor requested and

what was appropriated last year. One reason for the decline is that part of the \$100 million approved last year remains unspent.

The Legislature provided \$25 million specifically for innovative and short-term fixes for harmful algal blooms and to support the new state Harmful Algal Bloom Task Force.

The state budget also included \$31 million for state parks. Gov. DeSantis requested \$50 million. The difference between what he requested and what was approved, according to several sources, was funding intended to restore

SESSION
Continued on Page 12

Members of state Blue-Green Algae Task Force named

By BLANCHE HARDY, PG

Florida Gov. Ron DeSantis and Florida Department of Environmental Protection Secretary Noah Valenstein announced the appointment of five expert researchers and leading scientists to the newly established state Blue-Green Algae Task Force.

"The current algae blooms in the St. Johns River and Lake George are a stark reminder of how important and urgent this issue really is," said DeSantis. "My administration is taking another step forward toward addressing this by appointing five internationally renowned and respected scientists to the new Blue-Green Algae Task Force."

The task force will focus on supporting key funding and restoration initiatives, and making recommendations to

expedite nutrient reductions in Lake Okeechobee and downstream estuaries.

The task force is assigned with finding federal, state and local funding for the execution of priority projects. The recommended projects are intended to

FORCE
Continued on Page 16

Correction

In our story on Gov. Ron DeSantis' proposed budget in the April/May issue, we reported that state funding for local government cleanup contracting could be eliminated when, in fact, the proposal recommended only a reduction in current funding levels. We regret the error and any heartburn caused to our local government readers.

PUBLIC NOTICE

Are you a **Subcontractor**?

Have you done work for a Contractor under the **PETROLEUM RESTORATION PROGRAM**?
Have you been paid for that work?

Or has the State Licensed Contractor failed to pay you in a timely manner, if at all?

Did you know that under the PETROLEUM RESTORATION PROGRAM, State Licensed Contractors must pay their Subcontractors within 7 working days after they are paid by the State?
287.0585, Fla. Stat. (2018)

If you are a Subcontractor who has not been paid by a Contractor for work done under the PRP, **WE NEED TO HEAR FROM YOU.**

Pursuant to the PRP, IET did work for a Contractor during 2016 – 2017. That Contractor has been paid for all work done, but has FAILED to pay IET for most of the work.
IET is owed a substantial sum by this Contractor.

The State of Florida & the Florida DEP contend that assistance cannot be provided because the State was not in a contractual relationship with the Subcontractor.

We believe this is not equitable.

We are actively investigating all legal options and would like to collaborate with you.

Please contact Ellen Devlin to discuss options available to unpaid Subcontractors.
ellen.devlin@iet-inc.net or 888-721-8283



EPA awards grants to two research universities for PFAS studies

Staff report

The Colorado School of Mines in Golden, CO, and Oregon State University in Corvallis, OR, will receive a total of \$3.9 million from the U.S. Environmental Protection Agency to support research into polyfluoroalkyl substance challenges.

The agency noted that the grants support existing efforts related to PFAS, particularly their PFAS Action Plan announced a couple of months ago.

Colorado School of Mines researchers will examine transport and exposure from drinking water and diet.

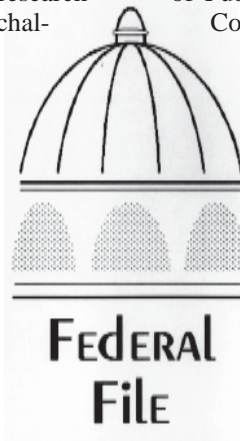
“The project aims to fill critical data gaps for the environmental transport of overlooked PFAS including evaluating uptake of PFAS into local foods and assessing the relative role of drinking water, diet and the indoor environment,” said Colorado Sen. Cory Gardner.

Chris Higgins, professor of civil and environmental engineering at the school, is the research team leader, with support from researchers at North Carolina State University, Duke University, Michigan State University and the Colorado School of Public Health at the University of Colorado.

The EPA support amounts to \$1.96 million. North Carolina General Assembly will contribute an additional \$262,500 cash match and other participating institutions are likely to provide additional funding.

Robert Tanguay, a distinguished professor in the College of Agricultural Sciences at Oregon State University, will lead the other research project that will receive \$2 million over three years in EPA support for genetic studies utilizing zebra fish and

mice. The results will help prioritize toxic PFAS for risk management.



Miami-Dade receives WIFIA loan.

The EPA will provide a \$99.7 million loan to Miami-Dade County from the federal Water Infrastructure Finance and Innovation Act.

The EPA loan will pay about half the cost of \$203.5 million for drilling 14 new deep injection wells in the county. The Florida Department of Environmental Protection will provide \$59.8 million through the state revolving fund.

The 14 wells to be drilled at three of the county’s Water and Sewer Department wastewater treatment plants are being drilled for several reasons.

The first is to redirect treated wastewater from the ocean outfalls currently in use. Those ocean outfalls must be abandoned by 2025 to meet Florida ocean outfall restrictions.

The project will also increase the availability of reclaimed water and reduce sanitary sewer overflows during wet weather and flooding by providing the option of pumping water into the ground during rainfall events.

According to a press release, the WIFIA loan alone could save Miami-Dade ratepayers \$15.7 million in loan costs compared to a typical bond issuance.

This is the eighth loan provided by the EPA under its WIFIA loan program. The agency has provided \$2 billion so far to finance four billion dollars of water infrastructure projects.

An additional 42 projects in 17 states are at some stage of consideration for future WIFIA funding.

Renewable energy will top coal. For the first time, U.S. renewable energy production—geothermal, biomass, wind, solar and hydro—will exceed energy production by coal-powered electric plants.

The Energy Information Administration predicts renewable energy generation will provide 2.322 and 2.271 thousand megawatt-hours per day in April and May, 2019, respectively.

Coal’s estimated output will be 1.997 and 2.239 thousand megawatt hours per day during the same months. The EIA said in a press release that renewable energy is on a trajectory to soon exceed coal-generated power.

The situation may change in the summer when electricity demand to meet air conditioning needs causes utilities to rely more heavily on coal plants to meet the extra demand.

In spite of recent record-setting retirement rates for coal plants, those that remain have a combined capacity of 240 gigawatts.

Although two months may seem a short time frame to base a prediction of renewable energy surpassing coal power, the EIA noted that it was in April 2015 that natural

FEDFILE

Continued on Page 14

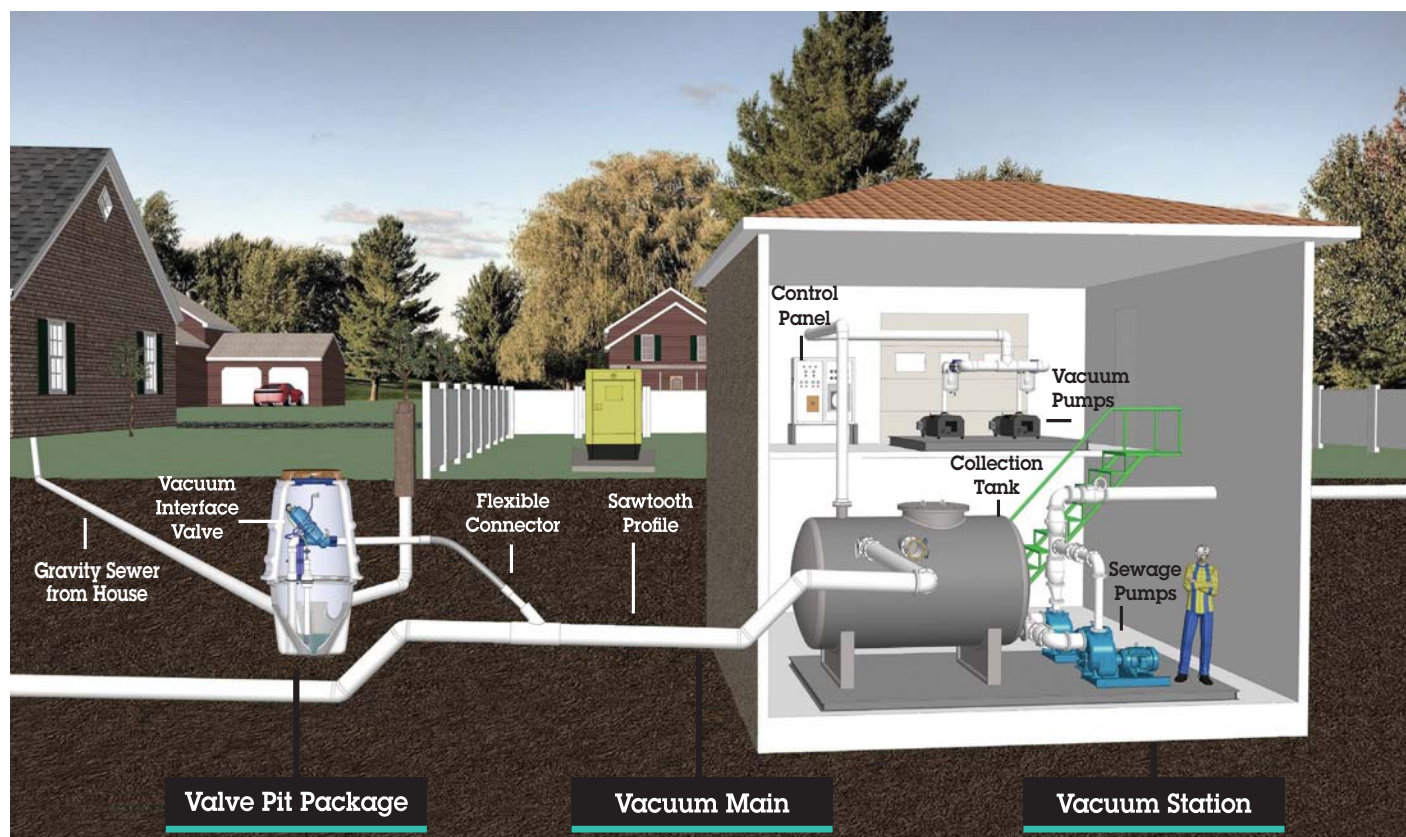


Airvac

Sewer Solution for Septic Replacement

Airvac Vacuum Sewer Systems are clean, efficient, easy to maintain, easy to install and typically less expensive than other collection systems. It is a proven technology with a long history of success and reliability.

- Minimal surface disruption
- Eliminate multiple lift stations
- Environmentally sound
- No power required at the valve
- Ease of field changes
- No operator exposure to raw sewage
- Shallow burial depth
- Smaller pipes
- No infiltration, inflow or exfiltration
- Low O&M



Contact us for a **free system layout and cost estimate.**

Aqseptence Group, Inc.
Vacuum Technology Systems

www.aqseptence.com

Rochester, IN - Headquarters
Tampa, FL - Sales Office
Phone +1 574 223 3980
info.airvac@aqseptence.com

Contributing writers and columnists

PRAKASH GANDHI
Senior Environmental Correspondent
Orlando, FL

BLANCHE HARDY, PG
Environmental Correspondent
Sanford, FL

ROY LAUGHLIN
Environmental Correspondent
Rockledge, FL

DEP asks court to reject Everglades oil drilling permit

Staff report

The Florida Department of Environmental Protection filed a motion for rehearing with the First District Court of Appeal and a request to certify to the Florida Supreme Court hoping to reverse an appeals court order to issue an exploratory oil-drilling permit to Kanter Real Estate LLC.

The state and local governments, along with environmental advocacy groups, have fought the permit request for four years.

Kanter Real Estate represents the Joseph Kanter family of bankers and developers. Their proposed oil well would be drilled in Broward County near Miramar, within the environmentally sensitive eastern portion of Water Protection Area 3A.

WPA 3A delivers water to Everglades National Park. A gap in the protection area's western levee also allows water flow into Big Cypress National Preserve, one of the most ecologically significant portions of the Everglades.

DEP denied the initial permit request and Kanter sued. DEP lost in administrative law court and in the First District Court of Appeal based on the degraded condition of the land specifically proposed for the well and its proximity to Interstate 75.

DEP denied the permit in order to protect the Everglades regardless of the condition of the specific proposed drilling site.

Production and distribution of oil from the site could impact both the surrounding environment as well as drinking water supplies in Broward and Miami-Dade counties.

DEP intends to work with local governments pursuing action to prevent the oil well and will monitor any related federal actions.

Naples artificial reefs. The city of Naples is creating artificial reefs in Naples Bay in hopes of restoring its declining population of oysters.

Naples Bay has lost 80 percent of its oyster reefs since the 1950s due to dredging for navigation and development projects.

The city, the National Oceanic and Atmospheric Administration, DEP, and the Naples Chapter of the Coastal Conservation Association of Florida, along with citizen and business volunteers, are undertaking the new oyster reef restoration project to establish five acres of reef habitat in Naples Bay.

The reef restoration project will place oyster habitat substrate at three sites in the bay to provide habitat for oyster colonization.

The reefs are being built with hard substrate including shell-filled mesh bags, loose shell and rock for juvenile oysters to attach to and grow.

Increasing numbers of juvenile oysters will attach to the substrates over time, forming a new reef.

Duke solar. Duke Energy recently began operations at its new 74.9-megawatt Hamilton Solar Power Plant in Jasper. The plant will generate enough power to energize more than 20,000 homes at peak production.

The facility is part of the company's strategic, long-range plan to build or acquire 700 megawatts of solar energy in Florida by 2022.

Duke broke ground for the plant in July, 2018. The project was initiated by Tradewind Energy Inc. and completed by Duke.

The company's Florida branch currently owns and operates nearly 100 MW of solar energy resources throughout its regulated service territory.

"Duke Energy solar projects bring the greatest amount of renewable energy online for customers in the most efficient and economical way," said Catherine Stempien, Duke Energy Florida president.

"Building solar power plants like Hamilton is part of our ongoing strategy to offer sustainable, diverse and smarter energy solutions that our customers have told us they value," she said.

The company also announced plans this year to break ground on the Columbia Solar Power Plant in Fort White. The 74.9-megawatt Columbia facility will be developed by Core Solar and will be operated and maintained by Duke.

Columbia is expected to be operational by March, 2020.

The Hamilton and Columbia solar plants combined are expected to eliminate approximately 645 million pounds of carbon dioxide emissions—equivalent to removing 63,000 cars from Florida roads—during their first year of commercial operation.

discovery of contaminants in water below critical human impact thresholds, but above thresholds for fish and aquatic life. Contaminants in groundwater leaving the site could eventually discharge into Perdido Bay.

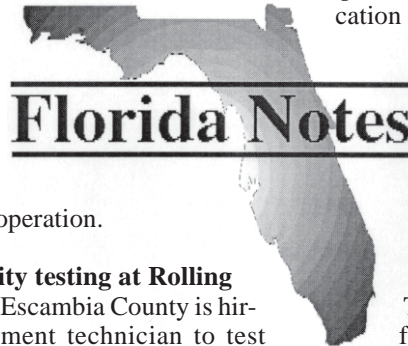
The landfill is referred to as "The Pit" by residents of Wedgewood, a predominantly African American community surrounding the site.

Residents suspect local adverse health impacts are the result of the landfill's location and operation. The county halted dumping at Rolling Hills in 2014 and the state revoked the landfill's operating permit in 2015.

The landfill was ordered closed by the state, but progress has been slow.

Taronis approved. Taronis Technologies Inc. was accepted for inclusion in DEP's Library of Accepted Technologies.

The company owns a patented plasma arc technology that enables two primary end-use applications for fuel generation and water decontamination.



Florida Notes

Water quality testing at Rolling Hills Landfill. Escambia County is hiring an environment technician to test water quality at its closed Rolling Hills Landfill.

The new position was announced a month after county commissioners voted to dedicate roughly \$72,000 for water quality testing at Rolling Hills and other waste management sites in the Wedgewood area.

The proposed testing is the result of the

NOTES
Continued on Page 16



HORIZON
ENVIRONMENTAL SERVICES

(888)815-9119
www.horizonllc.net

Vacuum Truck Services | Soil & Water Disposal
Drum Transportation & Disposal | Emergency Response

Servicing the Southeastern U.S.

A Waste Management Company
You Can Rely On.



Advanced Environmental Laboratories, Inc.
Florida's Largest Laboratory Network

When all else changes, you can count on AEL

Government rule changes play havoc with your business and staff. The economy has changed both business models and peoples' lives. Many subcontractors have been sold or changed names, and more still will. Regardless of what changes come, AEL will continue to be there for all our clients, tomorrow and beyond.

Count on it ... Count on us.

Seven Labs Means More Local Service and Faster TAT



Fort Myers - (239) 674-8130
Dan Lillie - dlillie@aellab.com

Jacksonville - (904) 363-9350
Jerry Allen - jallen@aellab.com

Gainesville - (352) 377-2349
Josh Apple - japple@aellab.com

Miami - (954) 889-2288
Wayne Khan - wkhan@aellab.com

Orlando - (407) 937-1594
Todd Romero - tromero@aellab.com

Tallahassee - (850) 219-6274
Tim Preston - tpreston@aellab.com

Tampa - (813) 630-9616
Sheila Wilcox - swilcox@aellab.com

The Florida Specifier makes every effort to ensure the accuracy and validity of all editorial and advertising content. The newspaper is independent in its views and does not support, endorse or guarantee any data, statements or opinions that appear under any reference or are attributed to or quoted from any known source. The views expressed by authors do not necessarily reflect the views of NTCC Inc. or the Florida Specifier.

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.

© Copyright 2019 by National Technical Communications Co. Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form without the publisher's prior written permission.

ENVIRO-NET
www.enviro-net.com

NTCC National Technical
Communications
Company, Inc.

P.O. Box 2175 • Goldenrod, FL 32733
(407) 671-7777 • Fax (321) 972-8937
info@enviro-net.com

Three schools receive funding for Everglades studies from SFWMD

Staff report

Florida International University, the University of Florida and Florida Gulf Coast University are slated to receive \$4.1 million over the next five years for Everglades-related studies. The South Florida Water Management District Governing Board approved the funding as part of a cooperative agreement.

The grants will support a broad array of subjects including water quality, hydrology and hydrogeology, vegetation, soils and sediments, organism studies, labora-

tory and quality assurance support, and data science including technical reporting and editing, and regulatory permitting.

The efforts are expected to provide a better understanding of how the greater Everglades ecosystem reacts to management practices and restoration activities.

Specific topics supported by the funding include a study of the negative impacts of excess nutrients on the state's surface water quality—including red tide—and its cleanup.

FIU scientists will monitor and sample local waterways along Florida's coast that

may nurture Atlantic red tides in the Gulf of Mexico.

The three universities in the study are also supported by the Florida Coastal Everglades Long Term Ecological Research program based at FIU. This effort, funded by the National Science Foundation, has supported some of the largest and longest studies about climate, water and human impacts on the Everglades.

Milton plans for new wastewater plant. The city of Milton in Santa Rosa County currently operates a wastewater treatment plant located south of its downtown area. The plant is expected to reach its maximum rated capacity of 2.5 million gallons a day by 2025.

With this in mind, city officials are making plans to use RESTORE Act funding to build a new wastewater treatment plant capable of handling eight million gallons a day at a different site.

Milton authorities have selected a 24-acre site at the Santa Rosa Industrial Park, east of town, for the new treatment plant. The plant will be built in five phases.

The county approved \$2 million for the project. Remaining funding is dependent on reworking an application to Triumph Gulf Coast Inc., and meeting with the RESTORE Act's Gulf Restoration Council.

RESTORE Act trust funds are available preferentially to eight counties including Santa Rosa. Milton City Manager Randy Jorgenson would like to see the project broken down into fundable components rather than try to obtain funding in one large grant.

So far, this divide-and-conquer strategy seems to be producing results.

The Northwest Florida Water Management District approved an easement to help the city relocate the wastewater treatment plant. That easement will allow the city to place a water line underneath Blackwater River to the wastewater treatment plant's new location.

The new wastewater plant will not discharge effluent to the Blackwater River, as the existing plant does.

This project is not now shovel-ready, but it may not be long before it is.

Navarre Beach aims to end wastewater discharges. The city of Navarre Beach now discharges treated wastewater to Santa Rosa Sound. Since 2001, the city has been working with Eglin Air Force Base and the Pentagon to switch disposal methods.

One alternative would be to spray the treated effluent on 200 acres of nearby Air Force Base property. Local leaders are hoping that by midsummer, they will have a lease agreement with U.S. Department of Defense officials to make that project a reality.

With a lease agreement in hand, county officials intend to build a nine-mile pipeline from Navarre Beach to an undeveloped tract northwest of the Holley community, and south of Choctaw Field Road. Rapid infiltration basins will be constructed on the 200-acre site.

Santa Rosa County received approvals from the Florida Department of Environmental Protection and from the Eglin Encroachment Committee. But it still needs federal, state and local funding.

The first step, the utility rates study, will be performed to start the project moving forward.

Meanwhile, DEP indicated it will renew a five-year permit allowing Navarre Beach to dispose of up to 900,000 gallons per day. Navarre Beach has averaged 320,000 gallons per day of treated wastewater into Santa Rosa Sound.

The Santa Rosa County Health Department operates a Florida's Healthy Beaches water quality monitoring program at adjacent Santa Rosa Sound beaches. So far,

Juana's Beach, Navarre Beach West and Navarre Park have consistently rated "good" with monitoring results.

It is too early to estimate an exact date when Navarre Beach's wastewater treatment plant effluent will no longer be discharged to Santa Rosa Sound, but that day appears to be in sight.

Reuse facility in Ormond Beach. The city of Ormond Beach's Breakaway Trail treatment plant is getting a water reuse upgrade.



The project's first step involves demolishing two reuse storage tanks, pumping facilities and a water tower that are all about 25 years old. They will

be replaced with a two-million-gallon ground-level prestressed concrete storage tank and a new pump station.

The new facilities will provide storage and pumping for residents in the western portion of the Ormond Beach reuse water service area. The plant will be operated jointly with Hunter's Ridge's reuse water system.

The total project will cost \$2.9 million. The St. Johns River Water Management District provided \$792,000. McMahan Construction in Deland was awarded the construction contract.

The scheduled completion date is January, 2020.

Lehigh Acres improvement district completes flood control work. The Lehigh Acres Municipal Services Improvement District in Southwest Florida recently completed an important flood control project, the Blackstone Preserve Project.

The preserve will store 700 acre-feet of water from a drainage canal, preventing the need to discharge it to the Caloosahatchee River.

The preserve includes 70 acres surrounded by a berm. Water pumped into the enclosure can leave only by percolating through the soil under it.

The primary goal of the storage project is to retain nutrients that might otherwise cause algal blooms. It is specifically intended to prevent cyanobacteria blooms, according to local reports. The project is also expected to renourish the drinking water aquifer.

Most Lehigh Acres residents use private drinking water wells, not public water and sewer systems.

Project funding came from the Lehigh Acres Municipal Services Improvement District, \$317,000; and the Florida Department of Environmental Protection, \$200,000.

The South Florida Water Management District provided additional funding, coordinating with a Florida Department of Transportation project to provide the equivalent of \$20 million for the project.

The Blackstone Preserve project is one of eight projects in various stages of completion intended to improve the area's water storage capacity.

Algae bloom study partnership. Mote Marine Laboratory and Aquarium and Florida Gulf Coast University are now partners in an effort to study algal blooms in order to better to mitigate their harmful impacts.

Dr. Michael Crosby, president and CEO of Mote, said that the intent was to use science to find innovative technologies to decrease the impacts of red tide and harmful algal blooms.

The prospects are for studies ranging from basic and applied science to innovative engineering and technology development.

DEP grants. DEP announced \$130,000 in grant funding to improve wa-

WHY CUSTOM DRILLING...

Because our commitment to safety is unparalleled.

We understand that an investment in safety, equates to tangible savings for our clients.

CUSTOM DRILLING SERVICES, INC.

800.532.5008
CUSTOMDRILLING.NET

100 Kid Ellis Road | Mulberry, Florida 33860 | PH: 863.425.9600 | FAX: 863.425.9620

FLOWERS
CHEMICAL LABORATORIES

**What's in your water?
Ask us!**

Laboratories across the state handling all of your environmental, waste and drinking water sampling and analyses

407-339-5984
www.flowerslabs.com

Since 1957

Latest ALA air quality report shows mixed results for Florida cities

By PRAKASH GANDHI

Florida cities got some good news and some bad news concerning levels of air pollution in the American Lung Association's 2019 State of the Air report.

The annual report card traces Americans' exposure to unhealthy levels of ozone

WATCH

From Page 4

ter quality and access improvements.

Funding comes through the department's Coastal Partnership Initiative. The four local governments receiving grants included Brevard, Indian River and Martin counties and the city of Riviera Beach in Palm Beach County.

Indian River County will use \$50,000 to create a five-acre salt marsh at its Jones' Pier Conservation Area. Indian River Lagoon water will be pumped into the marsh and circulated through it.

Nutrients, suspended solids and other pollutants will settle out and the water will flow back into the lagoon.

Martin County will receive \$50,000 to complete public access amenities at Hutchinson Island's Clifton S. Perry Beach.

The beach improvements include an ADA-compliant non-motorized watercraft launch, replacement of 300 feet of deteriorated dock and boardwalk, and signage.

Brevard County is slated for \$20,000 to design and install a living shoreline along North Indian River Drive in Cocoa. Educational signage will also be installed.

The city of Riviera Beach will receive \$10,000 for ADA compliant upgrades to its Bicentennial Park Improvements including roll-out accessibility mats with a continuous unobstructed path to the water, three floating wheelchairs and a hurricane-rated beachfront kiosk to store the equipment.

DEP also awarded \$75,000 in funding to Santa Rosa County to fund coastal access and water quality improvements at the Archie Glover boat ramp in Milton.

Upgrades there include ADA-compliant restroom facilities, an ADA-accessible approach ramp and a new adaptive kayak launch with adjoining floating dock.

SJRWMD approves 21 projects in 10 counties. Ten counties in the St. Johns River Water Management District will share \$16.2 million to support 21 projects related to the construction of water supply and water conservation improvements, and flood protection projects. The funding comes from their annual district-wide cost-share program.

SJRWMD noted that 19 of the projects comply with Gov. Ron DeSantis' Executive Order 19-12 to promote environmental protection including addressing algal blooms and nutrient reduction.

Sixteen of the water quality protection projects are estimated to reduce nutrient loads by 20,700 pounds of nitrogen per year and 14,280 pounds of phosphorus per year.

The projects include wastewater treatment improvements in Volusia, Clay, Marion and St. Johns counties.

Septic-to-sewer conversion in the city of Longwood and in Brevard and Indian River counties also received funding as did muck removal in the city of Cocoa Beach.

Three water supply projects are expected to provide three million gallons per day of alternative water supply and to conserve 12 million gallons per day.

Recipients of these projects include the Clay County Utility Authority and the Jacksonville Electric Authority's Low-Income Toilet Exchange Conservation Program.

Other projects fall into the category of flood protection. Seven Springs' restoration projects will benefit outstanding Florida Springs including Silver, Volusia Blue and Wekiwa.

The district received 48 applications requesting a total of \$31.6 million. In the selection process, the SJRWMD awarded

and particle pollution.

The latest ALA report covered the most recent air quality data available collected by states, cities, counties, tribes and federal agencies from 2015 through 2017.

"The report showed mixed ratings," said Ashley Lyerly, director of advocacy for the American Lung Association.

"In Florida, while we saw progress in extra points if an applicant provided evidence of an ordinance adopting the district's Water Conservation Rule.

Land purchase will protect Ichetucknee Springs. Gov. DeSantis and the Florida Cabinet agreed to buy 160 acres of land in Columbia County using funds from the Florida Forever program. The purchase will help protect the Ichetucknee Springs springshed.

The land includes a dry valley, the Ichetucknee Trace, which marks a major underground conduit supplying water to Ichetucknee Springs.

Purchase of the land will improve water quality and quantity reaching Ichetucknee Springs and help reduce algae growth.

The purchase price the state agreed to is \$518,400. The closing on the sale had not been announced as of early May.

some cities for ozone pollution, but there are a number of cities that are still experiencing unhealthy days of high ozone and also higher year-round particle pollution," she said.

Each year, the report provides an assessment of the two most widespread outdoor air pollutants, ozone pollution and particle pollution.

The report analyzes particle pollution in two ways, through average annual particle pollution levels and short-term spikes in particle pollution.

Palm Bay, Melbourne and Titusville were the only cities in the state on all three cleanest cities' list for ozone levels, year-round particle pollution and short-term particle pollution.

"I think that, nationwide, the most progress we saw was in reducing year-round particle pollution," Lyerly said.

"One of the reasons for this is the enforcement of the Clean Air Act," she said. "The retirement of diesel engines and cleaning up power plants have also played a big role."

Warmer temperatures brought by climate change make ozone both more likely to form and harder to clean up.

"The impact of climate change was felt in places like Miami, Fort Lauderdale and

Orlando," Lyerly said. "Warmer temperatures, wildfires and changing weather patterns lead to higher levels of ozone and particle pollution."

Compared to last year's report, the cities of Miami, Fort Lauderdale, Port St. Lucie, Orlando, Lakeland and Deltona experienced more unhealthy days of high ozone in this year's report.

The report showed that ozone levels increased in most cities nationwide, largely due to the global heat experienced over the three years tracked in the report.

"The three years covered in the report were the three warmest years in human history," Lyerly said.

The report found that Miami, Port St. Lucie, Fort Lauderdale, Jacksonville, Tampa, St. Petersburg and Clearwater had fewer days when short-term particle pollution reached unhealthy levels.

Lyerly said additional action by federal, state and local governments is needed to improve air quality in Florida in the future.

"We need to see continued implementation of the Clean Air Act, and the administration and Congress need to adopt science-based solutions to reduce emissions that are causing climate change," Lyerly said.



Florida Specifier

2019 Environmental Lab Directory

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

You're invited to complete the form below, providing details about your lab and its analytical capabilities. **There is a fee of \$200 to list your lab this year.** (*Fee waived for Specifier advertisers, and 2018-19 FRC exhibitors.*) In addition to your listing in the directory, **your lab will also be included in a special lab listing on our Enviro-Net website.**

Please type or LEGIBLY print the information requested and return as soon as possible to Mike Eastman via fax at (321) 972-8937, 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 **Wednesday, July 3, 2019.**

Note: If you were listed last year, we will be in touch. Do not complete this form.

Please include only lab operations, capabilities and personnel in Florida.

Laboratory name: _____

Primary Florida address: _____

City, State, Zip: _____

Phone: _____ **Fax:** _____

E-Mail: _____ **Web:** _____

Contact: _____ **Title:** _____

Locations in FL: _____

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:** _____

What single issue has most affected labs in Florida over the past year?

Are you a current Specifier advertiser or FRC exhibitor? _____ Yes _____ No

Contact me about: _____ Advertising in the *Specifier's* Lab Focus issue
 _____ Submitting a column for the Lab Focus issue

Advocates reach tentative pact with FPL over Turkey Point cooling canals

By **BLANCHE HARDY, PG**

The Southern Alliance for Clean Energy, the Tropical Audubon Society and Friends of the Everglades entered into a tentative settlement with Florida Power & Light Co. on Clean Water Act disputes regarding the cooling canal system at the Turkey Point nuclear power plant, Units 3 and 4.

In 2016, SACE, Tropical Audubon and Friends of the Everglades, filed a federal lawsuit against FPL for discharge of polluted water from its Turkey Point nuclear power plant's cooling canals into Biscayne

Bay and groundwater in violation of the federal Clean Water Act.

FPL was already operating under a stringent consent order with the Florida Department of Environmental Protection that required the utility to implement a range of comprehensive solutions to improve operation of the canals, halt and retract the hypersaline plume caused by the canals, update and expand its monitoring network, and perform restoration projects as well as monitor for and prevent impacts to Biscayne Bay.

At the time, FPL estimated that Turkey Point was dumping 600,000 pounds

of salty water per day from its cooling canals into Florida waters.

SACE noted that the resulting groundwater plume extended at least four miles west of the canal system potentially impacting the drinking water supply of three million South Floridians.

The lawsuit followed.

On April 9, 2019, Diane Curran, an attorney with Harmon, Curran, Spielberg & Eisenberg LLP representing the groups, submitted a notice of withdrawal to the U.S. Nuclear Regulatory Commission for the 2016 legal action before the Atomic Safety and Licensing Board regarding the subsequent license renewal proceeding for FPL's Turkey Point Units 3 and 4.

"The parties in the Clean Water Act lawsuit have reached settlement in the suit and have requested a stay in the legal proceedings to allow the parties to present joint recommendations to DEP regarding permit conditions," said Jennifer Rennicks, director of policy & communications for SACE.

"The settlement also addresses water quality in Biscayne Bay in a manner that will be good for Florida and the natural environment in and around FPL's Turkey Point generating facility in Miami-Dade County," she said.

SACE's petition states the group "is withdrawing from this proceeding as part

of the global settlement. At the parties' request, the U.S. District Court for the Southern District of Florida has stayed the Clean Water Act litigation with the anticipation that it will be dismissed once the settlement is finalized."

The parties in the settlement anticipate that it will be finalized over the next 120 days and include revisions to the National Pollutant Discharge Elimination System permit to address the salinity of groundwater and to take other measures to improve water quality in Biscayne Bay.

SACE, Friends of the Earth Inc., the Natural Resources Defense Council Inc., Miami Waterkeeper, Albert Gomez and Monroe County, as an interested governmental participant, recently received a favorable ruling from a federal licensing panel allowing SACE to conduct a hearing on FPL's application for a second 20-year license renewal extending the operation period of Turkey Point Units 3 and 4 to 2053.

The hearing was proposed to consider whether FPL violated federal laws by failing to assess the potential environmental benefit of using mechanical draft cooling towers rather than the existing cooling canal system.

The hearing would also consider the impacts of the existing cooling canal system on the American Crocodile.

Court allows FPL to recover Turkey Point canal cleanup costs from customers

By **BLANCHE HARDY, PG**

In April, the Florida Supreme Court unanimously upheld the Florida Public Service Commission's December, 2017, decision to allow Florida Power & Light Co. to bill its customers approximately \$176 million to cover the cost of cleaning up groundwater contamination from the Turkey Point nuclear power plant's cooling canal system.

The Office of Public Counsel, which represents the state's utility customers, appealed the PSC decision on behalf of the citizens of the state of Florida.

The basis for the court's decision rested on the Environmental Cost Recovery Clause, Section 366.8255, Florida Statutes, that allows a public utility to petition the PSC for recovery of "prudently incurred environmental compliance costs through an environmental compliance cost-recovery factor that is separate and apart from the utility's base rates."

The decision states that "environmental compliance costs" are defined as "all

costs or expenses incurred by an electric utility in complying with environmental laws or regulations."

"Environmental laws or regulations" are, in turn, defined as "all federal, state, or local statutes, administrative regulations, orders, ordinances, resolutions or other requirements that apply to electric utilities and are designed to protect the environment."

The court decision noted that monitoring data required by regulatory agreement led environmental regulators to conclude that the cooling canal system was causing violations of applicable groundwater quality standards, resulting in a consent order and consent agreement.

The court considered the order and agreement to be the evolution of FPL's original 2009 monitoring plan governing its canals.

In this context, it is important to note that the PSC had approved the recovery of the cost of the monitoring plan and its implementation from FPL's customers. The court further noted the evolution from monitoring to remediation was documented in regular updates provided by FPL to the PSC between 2009 and 2015 in accordance with the expectations of the 2009 monitoring plan.

The Turkey Point Plant is located on the shores of Biscayne Bay about 25 miles south of Miami. The facility operates five power generation units. Two of the five, Units 3 and 4, are nuclear-powered.

The 5,900-acre cooling canal system is comprised of unlined canals supporting Units 3 and 4 that take water from the canals for heat transfer into the power plant.

The heated water is then discharged from the plant back into the canals. Because the canals are unlined, canal water percolates into and mixes with the surrounding groundwater.

Turkey Point's cooling canals sit on top of a shallow lens of freshwater at the top of the Biscayne Aquifer.

The Supreme Court's decision noted that, at the time of the construction of the canals, FPL "understood the salinity of the waters in the cooling canal system would increase over time. Water of higher salinity is denser than water of lower salinity and will tend to sink through lower-salinity water if placed on top of it."

FPL entered into an agreement with the South Florida Water Management District

COSTS
Continued on Page 7

Geoprobe DRILLMAX
5801 SW 6th Place, Ocala, FL 34474

Genuine Geoprobe®

Geoprobe® Southeast Service Shop
Ocala, Florida

NOW OPEN

- Specialty tools to service rigs efficiently
- Genuine Geoprobe® service parts
- Conveniently located one mile west of I-75 and an hour northwest of Orlando
- Experienced Geoprobe® service technician with over ten years of experience at Geoprobe® headquarters
- Learn more at geoprobe.com/service

7822DT Rental Now Available

Call today to schedule an appointment!

352-854-1780
5801 SW 6th Place, Ocala, FL 34474

LEADING PROVIDER OF ENVIRONMENTAL PRODUCTS, SYSTEMS, AND SERVICES FOR OVER 40 YEARS

Carbon Service & Equipment Company
A Division of Encotech, Inc.

- Full line of quality activated carbons, organo-clays and numerous medias for removal of VOCs, SVOCs and Metals; including Arsenic.
- Sale & Rental of remediation and dewatering systems.
- Turn-key non-hazardous & hazardous on-site change out services.
- Reactivation of spent carbon and disposal of medias.

• **Eighty Four, PA 724.222.3334** • **Orlando, FL 407.313.9113** • **Columbia, SC 803.447.0888**
sbazzoli@carbonservice.net jbelmore@carbonservice.net hwharter@carbonservice.net
www.carbonservice.net

Reuse water pipeline under Indian River rejected by county commission

By ROY LAUGHLIN

The Indian River County Board of County Commissioners denied approval of a wastewater reuse pipeline that was to run under the Indian River Lagoon between the Sea Oaks Wastewater Treatment Plant on the mainland to John's Island, an enclave of sea-side golf course homes on Hutchinson Island.

Commissioner Susan Adams cast the deciding vote against the pipeline project. Commissioners Joseph Flescher and Peter O'Bryan also voted against it. Board Chairman Bob Solari and Commissioner Tim Zore voted to approve it.

The John's Island Water Management Co. was seeking county approval to construct a straight-line pipe at a depth of 80-90 feet under the Indian River, under Hole in the Wall Island adjacent to the intracoastal waterway and under the intracoastal waterway to the John Island community.

The pipeline would have been constructed, according to testimony at a public hearing, by horizontal drilling that involves minimal trenching.

The pipeline project was controversial for weeks leading up to the vote. The Marine Resources Council, an Indian River environmental advocacy group with significant membership in five counties bordering the lagoon, lobbied hard against the project, asking its members to write letters of opposition and attend the commission meeting.

At the commission meeting, Leesa Souto, executive director of the MRC, said that the Indian River County section of the lagoon is in far better ecological condition than segments to the north and south.

The proposed pipeline construction and possible failure risks, she said, could "compromise an area of the lagoon that is a refuge for organisms that can't live in other areas of the lagoon. Indian River County has the cleanest part of the lagoon. It's a source for repopulation."

Souto also pointed to the risks associ-

ated with anomalies in geological profiles below the Indian River. Construction activities or post-construction pipe failure has the potential to contaminate the aquifer.

Submerged pipeline opponents noted that reuse water is already sent to Hutchinson Island through a pipeline suspended from the Wabasso Bridge. They proposed suspending an additional pipeline under the Wabasso Bridge to serve the island.

At the commission meeting, Michael Korpar, Johns Island general manager, said that John's Island residents would not pay for the alternative pipeline, indicating the company was motivated by the low-price option and hoping the public would subsidize the least expensive option available regardless of environmental risk and habitat degradation.

The John's Island utilities company was prepared to pay \$6 million for the under-the-lagoon reuse water pipeline. The alternative pipeline along the bridge route, which would include Indian River County financial participation, would cost \$7.4 million.

Prospects for the bridge route are complicated in their own way. There may not be enough water for an expanded wastewater distribution system on North Hutchinson Island as far north as Wabasso Bridge.

A planning and engineering study completed by Schulke, Bittle & Stoddard released in April, 2019, stated that the Hobart facility, a wastewater storage and pumping plant, has a three-million-gallon storage tank and is designed to deliver up to 1.6 million gallons per day.

The report estimated that supplying all North Hutchinson Island's estimated future demand would require 4.2 million gallons a day.

In addition, existing pipes at Wabasso are older and might not support more delivery demands. The \$7.4 million cost estimate for the Wabasso route to Johns Island therefore required additional pipes and water storage.

Indian River does not currently have the necessary reuse water supply in place to meet the potential demand and it could be some time before it does.

Under the proposed agreement with Johns Island, the community would pay for the reuse water pipeline and, upon completion, would convey it to Indian River County Utilities. In return, it will be given up to one million gallons a day at reduced rates.

The promise of giving away water today that has to be produced at unknown rates in the future seems extremely generous.

Even without the environmental con-

cerns of pipeline construction and potential failure, John's Island's current proposed pipeline plan is made more complex by the need for a construction permit under Hole in the Wall Island.

In a second vote, the board refused a temporary construction permit to use the county's right of way across the island.

Even the authority to grant that permit was in contention. Last September, the Indian River Mosquito Control District Board, which claims it owns the island, refused to grant a pipeline easement.

After the hearing, Korpar said that the

Johns Island Water Management Co. will continue its campaign for its own pipeline access to reuse water.

Their initial effort will be to obtain a competent title search that supports an insurable right-of-way ownership by the county so that it can legally provide a temporary construction easement under Hole in the Wall Island.

Depending on the title search results, the Indian River County Board of County Commissioners could see the pipeline project on its meeting agenda again later this year.

Preferred Drilling is pleased to announce the acquisition of Huss Drilling's Bonifay Branch effective

3/1/19

With this purchase we now offer-

17 crews operating daily including:

2 Sonic rigs (8140 LS & 8140LC)

2 Full time remediation crews

4 Conventional rigs (D120, CME75 & D50s)

10 DPT crews (7822's, 7720 & 54LT)

Branches in: Pinellas Park, Lakeland, Live Oak, Milton and now Bonifay

Ph: 727-561-7477 / www.pdsflorida.com

How do you keep up with all that's going on in Florida?

The *Florida Specifier* provides bi-monthly news coverage of the environmental issues that matter the most—water resources, supply and distribution; soil and groundwater remediation; wastewater treatment and reuse; hazardous waste management; stormwater management; air quality and much more. There's just no better way to keep up with what's happening in your industry.

Subscribe today!

Name: _____
 Title: _____
 Company: _____
 Address: _____
 City: _____ St: _____ Zip: _____
 Phone: _____

Send \$24.95 for one year (six issues) or \$49.95 for three years to: NTCC Inc., P.O. Box 2175, Goldenrod, FL 32733. Or subscribe online at www.enviro-net.com/florida-specifier/subscribe/.

(NTCC Inc. Federal Tax ID: #59-3036689)

COSTS

From Page 6

in 1997 that required the utility to implement protective measures in conjunction with the canal system to prevent salt-water intrusion from affecting the Biscayne Aquifer freshwater lens and the Everglades.

FPL was required to operate the system to assure no greater saline impact than what would have occurred naturally without the installation of the cooling canals.

Things began to get interesting in 2008 when FPL applied for permission to begin "Uprate," a project to increase the generating capacity and, subsequently, the thermal load of Turkey Point.

DEP issued new conditions for operating the upgraded units. The court's decision specifically noted that the Uprate project "could cause the temperature and salinity of the cooling canal system to increase, and imposed conditions to address these changes."

As part of the conditions, FPL and the water district entered into the 2009 monitoring plan under which FPL was required to delineate existing and future impacts of the canals on groundwater and to identify solutions to address impacts.

The court's decision reported that by 2014, monitoring data allowed regulators to conclude that canal waters had infiltrated the Biscayne Aquifer as much as three miles west of the canal system, and that the canals were releasing, on average, 600,000 pounds of salty water a day into the Biscayne Aquifer.

In 2016, FPL petitioned the PSC for the recovery of actual and estimated environmental compliance costs. FPL argued that the PSC had previously approved the 2009 Monitoring Plan for cost recovery.

The court decision noted that FPL had further presented evidence at that time that the project may need to progress from monitoring to implementing corrective actions if warranted by the results of the monitoring effort.

Florida
Specifier

Clearwater approves water supply and treatment master plan study

By ROY LAUGHLIN

Earlier this year, the Clearwater City Council approved a \$2 million master plan study of its utility department's water supply and treatment facilities.

The utility assets under the microscope include wellfields, supply pipelines, treatment plants and distribution systems.

McKim & Creed Inc. is performing the study that is expected to provide the city with a 30-year water supply and treatment master plan.

David Porter, director of Clearwater Public Utilities, said in an interview that it has been a while since his department has contracted for an independent expert master plan.

The one underway includes evaluations of the hydrogeologic conditions related to water supply from the city's wellfields, the adequacy of water treatment facilities and their capacity to meet future needs, and prospects for groundwater replenishment especially with respect to capital and operating costs.

The study will also consider the poten-

tial for sea level rise to affect water supply and treatment facilities.

The decision to conduct a master plan study now has resulted in a two-year delay in their controversial aquifer storage and recovery project that would inject highly treated wastewater into the Floridan Aquifer within a mile of one of the city's potable water wells.

The Southwest Florida Water Management District partnered with the city on the wellfield replenishment plan, agreeing to pay \$14.3 million to cover capital costs.

That was half the cost at the time the agreement was signed. Clearwater is responsible for its original half, plus any cost increases.

But as a result of increasing costs, city officials have put wellfield construction plans on hold.

The *Tampa Bay Times* reported that in 2016, the construction cost estimate was \$28.6 million. It rose to \$32.6 million in 2017 and \$235.2 million in 2018.

Estimated operating costs similarly rose to \$2.93 million a year, up from about \$2.4 million a year expected from a 2014 analysis of the pilot facility.

The wellfield renourishment project is delayed for financial reasons, pending completion of the utilities master plan, Porter explained.

The city and the water management district began planning for wellfield replenishment in 2014. Since 2016, Clearwater Public Utilities built and tested a pilot scale injection plant.

So far, the department has spent \$6.2 million to complete the project's final design and obtained all the permits needed to break ground on plant and injection well construction.

One of the benefits of wellfield injection is that it would inhibit saltwater intrusion into Clearwater's wellfields.

Hydrogeological studies conducted

during the pilot project stage indicated that it would take 10 to 20 years for the first injected water to reach Clearwater's closest potable water well.

Porter emphasized that his department is concerned about the increase in project costs, which the master plan will address.

He said the report should give them a better idea of the real value of the groundwater renourishment project.

When factored into the expected water supply needs over the next 30 years, and including the influence of rising sea levels, the injection project's increased costs may justify paying more for the plan.

New regulations expected to be proposed by Florida's new Potable Reuse Commission may influence the plan's future and may have influenced the decision to delay.

The commission's progress so far has been much slower than expected, with no report submitted for this year's legislative session, as was originally proposed.

Many people anticipate that the commission will endorse liberal potable water reuse guidelines. But with Gov. Ron DeSantis' surprise endorsement of stricter water quality policies, the ability of the commission to influence state policy and rulemaking may be diminished.

Direct and indirect potable reuse, which the vast majority of other states have strictly forbidden, could be a less viable solution in Florida than it once seemed to be.

"We and the water management district have every intention of moving forward (with the wellfield replenishment project)," said Porter. "The master plan has to be completed first."

Clearwater will be reviewing its entire infrastructure system and, while doing so, one relatively small component of it will have to wait at least two years before construction could perhaps resume.

Sustainable farming grants awarded

Staff report

Five farms and the Suwannee County Conservation District recently shared \$300,000 in grant funding from the Sustainable Farming Fund. The funding underwrites the adoption of environment-friendly farming practices that conserve water and improve water quality in the Suwannee River watershed.

The grant funds private farmers who purchase and install high-tech precision agricultural equipment that applies fertilizer to the root zone of crops rather than spreading it across crop fields.

The SCCD plans to use its award for a

pilot project helping as many as ten farms purchase and install new equipment for eco-friendly farming techniques.

SFF awards may be used as matching funds for other programs if the purchases upgrade irrigation and fertilizing equipment. That includes the Suwannee River Water Management District's Water Restoration Assistance's Spring Restoration Funding.

Source monies for SFF arose through a lawsuit settlement against Pilgrim's Pride Corp. Plaintiffs in the suit claimed the company's Live Oak chicken processing plant discharged unlawfully to the Suwannee River, violating the Clean Water Act.

Pilgrim's Pride agreed to a mediated settlement that provides \$1.3 million, the entire SFF funding base.

SFF funding will be awarded over a three-year period with approximately \$300,000 provided each year. The settlement money will be exhausted by the end of the third funding round.

Stetson University's Institute for Water and Environmental Resilience is the fund manager. It convened an eight-member committee to review funding requests, select grantees and administer grants.

The committee makes site visits and will monitor the reduction of fertilizer use.

"Eighty percent of the Suwannee River's impairments have been caused by agricultural runoff," said Clay Henderson, executive director of Stetson's Institute for Water and Environmental Resilience. "The Sustainable Farming Fund will help farmers establish sustainable farming practices to reduce fertilizer use and agricultural runoff flowing into the Suwannee River and make an environmental difference, which is going to be a real game changer."

To receive grant, a farm must initially meet three standards. Farms must be less than 500 acres and have sales of less than \$500,000. They must be currently certified in Florida's Agricultural Best Management Practices Program, and, if selected, recipients must provide quarterly reports about their program during the grant year.

ST. JOHNS RIVERKEEPER®



The St. Johns Riverkeeper
Lisa Rinaman

"Clean water is the lifeblood of Florida's economy and essential to our health and quality of life. We cannot afford to sacrifice our valuable water resources for the politics of the moment and the fortunes of a few."



PROTECTION AND ENFORCEMENT

GOOD FOR OUR RIVER.
GOOD FOR YOUR BUSINESS.

ST. JOHNS RIVERKEEPER
FOR THE RIVER. BY THE PEOPLE.

JOIN
ST. JOHNS RIVERKEEPER®
stjohnsriverkeeper.org/join



BEEMATS Floating Treatment Wetlands

Remove Nitrogen and Phosphorus from Stormwater
(386) 428-8578 beemats@gmail.com

Everglades update: Judge rejects SFWMD motion to vacate 1991 decree

By **BLANCHE HARDY, PG**

Earlier this year, Miami U.S. District Judge Federico Moreno rejected South Florida Water Management District's motion to vacate a 1991 consent decree and memorandum of law allowing federal oversight of Everglades restoration.

The district's governing board sighted a current Clean Water Act permit and adopted water quality standards as the viable replacement for the decree.

The district's motion to vacate is supported by the sugar industry—but not environmental advocates.

Judge Moreno indicated his denial of the district's motion was the result of the governor's replacement of water management district board members.

The district's motion to vacate the existing consent decree was entered on the docket before Florida's new governor, Ron DeSantis, took office.

The judge also indicated that he will require a thorough presentation of scientific and environmental evidence in support of any future motion.

The water management district attorney's response to Judge Moreno's motion was entered on the court's docket on Jan. 30, 2019, three weeks after the new governor assumed office.

The opinion crafted by the district's attorneys contains surprisingly political statements, such as, "Were the Decree merely unnecessary, the District's Motion to Vacate the Decree could seem pointlessly antagonistic to those desiring the Decree's comfort; an academic debate over principles of federalism."

"But here, the ivory tower is occupied by those unaccountable to the state officials they would so casually deprive of legislative and executive powers. Those who

cling to the Decree do so without concern for urgent, highly-politicized state priorities—the embodiment of the public's interest."

It continued, "The Decree's defects did not emerge overnight. The District's concern over conflict between the Decree and comprehensive Everglades restoration is longstanding. In 2014, the District conditioned its support for the Central Everglades Planning Project on modification of the Decree. The U.S. Army Corps of Engineers agreed that redistribution of flows and delivery of additional water to the Park (i.e., restoration) under CEPP necessitated amendment of Obligations under the Decree and the goals of comprehensive Everglades restoration are frequently conflated in casual discourse."

The decree is the result of a lawsuit filed by the federal government in 1988 alleging that the Florida Department of Environmental Protection and the water management district were allowing the ambient water quality in the Arthur R. Marshall Loxahatchee Wildlife Refuge and Everglades National Park to deteriorate below the quality that existed in 1979.

The district leased refuge land to the federal government and delivered water to the park under a separate agreement.

The federal government's suit claimed breach of contract and damages as the result of the state's violation of water quality standards for the discharge of nutrients, specifically phosphorus, from the Everglades Agricultural Area into the refuge and subsequently downstream into the park.

Florida countered, claiming the corps was equally responsible for the nutrient problem for allowing the unimpeded movement of polluted water through the system via their control structures and that

the federal government was also responsible for having promoted agricultural discharges by exempting agricultural stormwater runoff from regulation in the Everglades Agricultural Area.

Being co-engaged in the discharge of polluted water, the consent decree was signed in cooperation by both the state and federal governments in 1992.

DEP records indicate that Florida has spent an estimated \$2 billion on Everglades projects to date and plans to spend another \$1 billion over the next four years.

CEI
1999-2019
YEARS

- Remediation
- Environmental Eng.
- Design/Build
- Fueling Facilities

www.cherokeecorp.com

Orange County to build new transfer station

Staff report

Central Florida's economy is booming. So is its production of garbage.

To efficiently dispose of it, Orange County's Board of County Commissioners awarded a \$26 million contract to Kokalakis Contracting of Tarpon Springs to build a new solid waste transfer station.

When completed, it will make neighborhood curbside trash collection more efficient and less expensive.

The transfer station occupies a 10-acre site in an industrial park on LB McLeod Road. The county took over the site's operation from the city of Orlando in 1984 and renovated it in 1986.

The city still owns the land but Orange County owns the facility under the terms of a long-term land lease.

The transfer station handled more than 200,000 tons of garbage and trash in 2017. In 2018 it handled 167,000 tons—even though it was idled by a facility fire that caused it to be shut down for several months.

The \$26 million contract will pay for demolition of the existing facility and construction of a replacement. Planning documents describe construction of "a modern facility that can handle the increasing volume of waste in a more economically and operationally efficient and environmentally sound manner."

Capacity will be expanded from 900 to 2,000 tons per day and the new facility will feature underground utilities, truck scales, a vehicle maintenance garage and offices for Orange County Utilities Solid Waste Division staff.

The McLeod Road transfer station is expected to be out of operation for up to 18 months during replacement construction.

Curbside pickup trucks will transport waste to two alternative stations, the Porter Transfer Station on Good Homes Road and a Waste Management transfer station near the McLeod Road station.

HCR
HANDEX CONSULTING & REMEDIATION, LLC

ONE HCR! MANY VALUE
Handex Consulting & Remediation, LLC

HCR is celebrating 50 years in business this year!

Remediation | Industrial

- Soil & Groundwater
- Enhanced Biodegradation & Bioremediation
- OM&M Services
- Dredging

The Impact of Our Work is Your Future.

Handex Consulting & Remediation, LLC (HCR) has provided environmental assessment, remediation, emergency response, industrial sludge dewatering services and temporary wastewater treatment needs for 50 years. The HCR way is do what we say we are going to do by delivering innovative, technical, safe and flexible solutions for our client's specific needs. HCR takes pride in maintaining our proven track record. We highly value and deeply appreciate the relationships we've built with our clients over the last 50 years.

We have four strategically placed offices in Florida to help you with all of your environmental needs. Call on us to help you with your next project!

Winter Park | Fort Lauderdale | Tampa | Tallahassee

www.hcr-llc.com | (321) 441-9801

Clark
ENVIRONMENTAL.COM

Cleaning Earth One Ton at a Time

Landfill Disposal & Thermal Treatment

Drums | Vac Trucks | Totes | Rolloffs

Solids • Liquids • Sludges

MULBERRY | 800.276.2187 | CLARKENV.COM

JAEE
Environmental Service, Inc.

A Full Service Water Well Contracting Company

Specializing in Geoprobe® soil and groundwater sampling, bioremediation injections, monitoring well construction and abandonment.

Fleet of 15 Geoprobe® Machines Serving All of Florida
(5400 Truck Mounted, 54LT Track Mounted, 6600 Track/Truck Mounted,

Call or email for services today!
Phone: (954) 476-8333 Fax: (954) 476-8347
E-mail jaee@bellsouth.net or visit us on the web at www.JAEEenv.com

Ultrasound treatment technology may be one answer to Lake O algal blooms

By ROY LAUGHLIN

LG Sonic BV wants in on the battle to control algal blooms in Lake Okeechobee through the use of its ultrasonic treatment technology.

The company believes its ready-to-use hypersonic sound generator can “inactivate” cyanobacteria or eukaryotic algae cells such as diatoms at Lake Okeechobee outfalls.

The company has, over the past 15

years, developed a buoy-mounted instrument platform that radiates sonic energy within 1,600 feet of the sound generator to kill algae cells.

In addition to the ultrasound generator, the buoy carries solar panels to provide power. The solar cells also power GPS, a spectrometer that measures chlorophyll and phaeophytin in water, and a cell phone communications module that reports to facilities on land.

These functions are expressed in the

platform’s name, MPC, for “monitor, predict, control.”

The buoy reports its location, water color and instrument operations data. Measurements of chlorophyll and phaeophytin indicate photosynthetic cell densities. That information can be used in real time to determine where to treat and assess the effectiveness of ongoing treatment.

Ultrasound disables and kills by disrupting gas vacuoles inside and on microalgae. The ability to accomplish that is dependent on the size of the bubbles, and characteristics of the cells associated with the bubbles.

LG Sonic’s sound generator can be set at frequencies from 20-200 kHz and power levels of five to 40 watts to kill algae cells in a range of sizes from cyanobacteria (small) to diatoms (large). The company said that the frequency range and energy levels can be selected so that other organisms, such as zooplankton, fish and their eggs and macroinvertebrates, are not affected.

The technology was developed for use in small ponds or lakes where the buoys are moored and water movement is limited. The “contact time” with sound may be a significant contributor to eventual destruction by the relatively low power ultrasound.

According to Eric Eiffert, director of LG Sonic US, ultrasound treatment using their technology is quite effective in drinking water reservoirs, cooling ponds and industrial lagoons to both keep algae blooms from starting and quell them after they are underway.

Lake Okeechobee offers two new implementation prospects for LG Sonic’s technology, according to Eiffert.

First, the company proposes to moor an array of the necessary number of buoys, perhaps several dozen, in water flow paths leading to Lake Okeechobee’s outfall control structures.

They will kill algae in the water flowing past them before it reaches the St. Lucie

or Caloosahatchee rivers.

Eiffert also said that the buoys could be moved to any point in Lake Okeechobee where an algal bloom was forming to kill the algae before the bloom covers large areas or reaches a cell density that causes anoxia.

LG Sonic’s ultrasound technology is not being proposed as plug-and-play.

In a 2014 study conducted in the Canoe Brook Reservoir in Short Hills, NJ, cyanobacteria bloomed in the reservoir at summer’s end.

Effective cyanobacteria cell density reduction required three modifications of the device’s ultra sound program to reduce cyanobacteria cell densities.

The company is now conducting pilot projects in Florida in a partnership with AXI International in Fort Myers to characterize an effective ultrasound regime to eliminate cyanobacteria in Lake Okeechobee.

The tests also need to demonstrate that ultrasound at the available power levels will perform its intended functions in water moving through the ultrasound field, as would be the case in Lake Okeechobee or perhaps in canals leading from it.

Eiffert noted that LG Sonic currently has multiple clients in the US using their technology to limit algal blooms in still waters such as reservoirs. The closest project to Lake Okeechobee is in Georgia.

He said the company is currently placing its buoys in the Dominican Republic’s primary drinking water reservoir.

The application of ultrasound control in Lake Okeechobee does not seem to be outside the boundaries of the technology’s proven capabilities.

If LG’s ultrasound control works in Lake O as described, the South Florida Water Management District would have a choice of a control option that requires no chemical additions to the water, is mobile and has minimal effects on non-target plankton and larger organisms.



We turn specialty waste into recycling opportunities.

With over 30 fixed-base locations and new mobile service solutions, Clean Earth provides exceptional recycling and disposal solutions across the country for all your specialty waste needs.

Reliable | Expert | Solutions

Soil Treatment & Recycling

Dredged Material Processing & Beneficial Reuse

Hazardous & Non-Hazardous Waste Recycling & Disposal

Including Electronic, Universal, & Healthcare Waste



Contact Us for a Quote Today!
877.445.3478 | cleanearthinc.com



Study: More freshwater needed in Everglades

Staff report

Larger plants may be the first indication that saltwater levels are increasing in the Everglades, according to a Florida International University study.

Beneath the surface, however, the roots of these now larger, moderately salt-tolerant plants like sawgrasses will begin to wither and die if the water gets too salty.

If there’s no time for mangroves or other plants to take hold, soil could be lost, allowing more saltwater to migrate in over

time.

To slow this effect, more freshwater should be released into the Everglades, according to the two-year FIU study.

“There is a lot that can be done,” said lead author Ben Wilson, of the Southeast Environmental Research Center. “We’ve been making progress to bring more freshwater to the Everglades by putting parts of Tamiami Trail on bridges and building a new reservoir to store and then send clean water south.

“We need more measures like these that can improve freshwater flow from north to south. It’s what’s pushing back the saltwater.”

Healthier-looking plants might offer the first clue that sea level rise is affecting the freshwater Everglades. That’s because as saltwater interacts with the limestone bedrock of the Everglades, it releases phosphorus, a nutrient that helps plants grow.

“We want to provide awareness and time to allow decision makers to understand why it’s important to restore freshwater flow to the Everglades,” Wilson said.

FIU College of Arts, Sciences & Education researchers Shelby Servais, Sean Charles, Viviana Mazzei, Evelyn Gaiser, John Kominoski, Jennifer Richards and Tiffany Troxler were co-authors of the study, which was published recently in the journal *Ecology*.

The research is part of the Florida Coastal Everglades Long Term Ecological Research Program. Housed at FIU and funded by the National Science Foundation, the program studies how water, climate and people interact to impact the Everglades.

“This study shows that the effects of sea level rise on coastal wetlands are complex, and that long-term observations are needed to understand how these ecosystems are changing,” said David Garrison, a National Science Foundation Long-Term Ecological Research program director.

REALLY SMART SOLUTIONS

ETEC provides a complimentary site assessment and treatment plan for every project. To learn more about ETEC's bioremediation solutions, please visit us at ETECLLC.COM or email us at Info@ETECLLC.COM

Calendar

June

JUNE 10-12 – Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JUNE 12 – Course: Introduction to Lift Station Maintenance, Ft. Myers, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JUNE 12-14 – Conference: 2019 Annual Conference of the Florida Association for Water Quality Control: Falling Rains | Rising Tides, Naples, FL. Call (813) 641-7000, ext. 235, email info@fawqc.com or visit fawqc.com.

JUNE 13 – Course: Wastewater Collection System Cleaning and Maintenance, Ft. Myers, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JUNE 13 – Meeting: Reclaimed Water – Its Effect on Water Quality, Sunrise, FL. Presented by the South Florida Aquatic Plant Management Society. Call (954) 370-0041 or visit www.sfpams.org

JUNE 17-20 – Course: Backflow Prevention Assembly Tester Training and Certification, Jacksonville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JUNE 18-21 – Course: Wastewater Class B Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JUNE 21-22 – Course: Backflow Prevention Recertification, Jacksonville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JUNE 24-28 – Course: Backflow Prevention Assembly Tester Training and Certification, Rota, AL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JUNE 25-26 – Course: Backflow Prevention Recertification, Fort Myers, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JUNE 25-27 – Course: Introduction to Electrical Maintenance, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

July

JULY 6-7 – Course: Backflow Prevention Recertification, Bradenton, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JULY 8-12 – Course: Backflow Prevention Assembly Tester Training and Certification, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JULY 8-11 – Course: Backflow Prevention Assembly Tester Training and Certification, Miami, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JULY 9-12 – Course: Wastewater Class C Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JULY 12-13 – Course: Backflow Prevention Recertification, Miami, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JULY 18-19 – Course: Backflow Prevention Recertification, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JULY 19-27 – Course: Backflow Prevention 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 20-28 – Course: Backflow Prevention Assembly Tester Training and Certification, Tampa, FL.

Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JULY 22-23 – Course: Backflow Prevention Recertification, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JULY 24-27 – Conference: 2019 Annual Conference of the Florida Engineering Society and the American Council of Engineering Companies of Florida, St. Petersburg, FL. Contact Cherie Pinsky at (850) 224-7121 or visit www.fleng.org.

JULY 25-26 – Course: Backflow Prevention Recertification, Pensacola, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JULY 29-AUG. 1 – Course: Backflow Prevention Assembly Tester Training and Certification, Tallahassee, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JULY 29-AUG. 2 – Course: Wastewater Class A Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JULY 31-AUG. 2 – Conference: 2019 Annual Conference of the Florida Local Environmental Resource Agencies, St. Augustine, FL. Call (850) 701-4797 or visit www.flera.org.

August

AUG. 1-2 – Meeting: Annual Meeting of the Florida Section of the American Water Resources Association, Key West, FL. Email awra@awraflorida.org or visit www.awraflorida.org.

Save the Date

Florida Association of Environmental Professionals 2019 Annual Conference



Tampa
September 19-20
2019

UF TREEO Center UNIVERSITY of FLORIDA

ASBESTOS COURSES

Asbestos: Contractor/Supervisor
Oct. 21-25, 2019 | Gainesville, FL | CEUs: 3.5

Asbestos: Inspector
Oct. 7-9, 2019 | Gainesville, FL | CEUs: 2.1

Asbestos: Management Planner
Oct. 10-11, 2019 | Gainesville, FL | CEUs: 1.4

Respiratory Protection
Aug. 27-29 2019 | Gainesville, FL | CEUs: 2.4

Asbestos Refresher: Project Design
Sept. 9, 2019 | Gainesville, FL | CEUs: 0.8

Asbestos Refresher: Inspector
Aug. 6 2019 | Ft. Walton Beach, FL | CEUs: 0.4
Sept. 10, 2019 | Gainesville, FL | CEUs: 0.4

Asbestos Refresher: Management Planner
Aug. 6, 2019 | Ft. Walton Beach, FL | CEUs: 0.4
Sept. 10, 2019 | Gainesville, FL | CEUs: 0.4

Asbestos Refresher: Contractor/Supervisor
Aug. 7, 2019 | Ft. Walton Beach, FL | CEUs: 0.8
Sept. 11, 2019 | Gainesville, FL | CEUs: 0.8

WATER & WASTEWATER COURSES

Effective Utility Leadership Practices
Aug. 27-28, 2019 | Bonita Springs, FL | CEUs: 1.35

Water Distribution Systems Operator Level 1 Training Course
Sept. 24-26, 2019 | Kissimmee, FL | CEUs: 2.4

Wastewater Class B Certification Review
Sept. 30 - Oct. 3, 2019 | Gainesville, FL

Wastewater Class C Certification Review
Sept. 23-27 2019 | Gainesville, FL

Water Class A Certification Review
Sep. 9-13, 2019 | Gainesville, FL

Water Class B Certification Review
Oct. 29 - Nov. 1, 2019 | Gainesville, FL

Water Class C Certification Review
Aug. 13-16, 2019 | Gainesville, FL

TRAIN THE TRAINER COURSES

Train the Trainer: How to Design & Deliver Effective Training
Nov. 5-7, 2019 | Gainesville, FL | CEUs: 2.4

BACKFLOW PREVENTION COURSES

Backflow Prevention Assembly Tester Training & Certification

Jul. 8-11, 2019 | Miami, FL
Jul. 8-12, 2019 | Altamonte Springs, FL
Jul. 15-19, 2019 | Davie, FL
Jul. 19-27, 2019 | Venice, FL**
Jul. 20-28 2019 | Tampa, FL*
Jul. 29 - Aug. 1, 2019 | Tallahassee, FL
Aug. 5-9, 2019 | Destin, FL
Aug. 12-16, 2019 | Gainesville, FL
Aug. 26-29, 2019 | Jacksonville, FL
Sep. 2-6, 2019 | Pensacola, FL
Sep. 7-15, 2019 | Tampa, FL**
Sep. 9-13, 2019 | Orlando, FL
Sep. 16-20, 2019 | Davie, FL

*Two consecutive Sat. & Sun. **Two consecutive Fri. & Sat.

Backflow Prevention Assembly Repair and Maintenance Training & Certification

Aug. 19-20, 2019 | Venice, FL
Aug. 19-21, 2019 | Gainesville, FL
Oct. 9-11, 2019 | Orlando, FL
Oct. 4-6, 2019 | Orlando, FL

Backflow Prevention Recertification

Jul. 6-7, 2019 | Bradenton, FL
Jul. 12-13, 2019 | Miami, FL
Jul. 18-19, 2019 | Gainesville, FL
Jul. 22-23, 2019 | Altamonte Springs, FL
Jul. 25-26, 2019 | Pensacola, FL
Aug. 1-2, 2019 | Davie, FL
Aug. 1-2, 2019 | Destin, FL
Aug. 2-3, 2019 | Tallahassee, FL
Aug. 17-18, 2019 | Tampa, FL
Aug. 23-24, 2019 | Jacksonville, FL

SOLID WASTE COURSES

Initial & Refresher Solid Waste Courses
Aug. 6-8, 2019 | Plant City, FL
Sept. 18-20, 2019 | Jacksonville, FL
Nov. 11-13, 2019 | Gainesville, FL

HAZWOPER COURSES

Hazardous Waste Regulations for Generators
September 24, 2019 | Gainesville, FL | CEUs: 0.8
40-hour OSHA HAZWOPER Training Course
October 14-18, 2019 | Gainesville, FL | CEUs: 4.0
24-hour OSHA HAZWOPER Training Course
October 16-18, 2019 | Gainesville, FL | CEUs: 2.4

Florida Specifier

P.O. Box 2175
Goldenrod, FL 32733

Michael R. Eastman
Publisher/Editor
mreast@enviro-net.com

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 only. The opinions expressed on this page are those of the authors.

www.uftreeo.org | (352) 392-9570

SESSION

From Page 1

state parks in the Panhandle that were damaged by Hurricane Michael. It remains to be seen how much of the funding will be directed toward the damaged parks.

Overall, Gov. DeSantis requested \$625 million for environmental spending and Senate Budget Chair Bob Bradley put the final tally for approved environmental spending at \$682 million.

This is a significantly more generous environmental spending package than Floridians have seen in a decade.

Florida's soil and groundwater cleanup enterprise held its own in the funding department this year. The Legislature approved \$110 million for the Petroleum Restoration Program, maintaining a funding level equal to that of last year.

Hazardous Waste Cleanup will get \$8.5 million in state funds, followed by the Drycleaning Solvent Cleanup Program, at \$5.5 million.

Environmental legislation passed

Senate Bill 92, which authorized the C-51 Reservoir south of Lake Okeechobee, allows Phase 2 of the project to be funded as a project component of the Comprehensive Everglades Restoration Program.

The bill listed stipulations regarding how the South Florida Water Management District must maximize reductions in Lake

Okeechobee regulatory releases to the St. Lucie and Caloosahatchee rivers. It also allowed water from Lake Okeechobee to be provided to meet consumptive use permits that are in accordance with district rules.

House Bill 325 amended criteria that DEP must use when determining beach management and erosion project funding priority.

Senate Bill 1552, the Florida Red Tide Mitigation and Technology Development Initiative, provided funding for a partnership between the state Fish and Wildlife Conservation Commission's Fish and Wildlife Research Institute and Mote Marine Laboratory to identify technologies and approaches to control and mitigate red tide and its impacts.

House Bill 521 will allow a government entity to create or provide mitigation for a project other than its own regardless of whether or not the land used was previously purchased for conservation.

The bill does away with exceptions for mitigation projects for transportation, mining activities, single-family lots, electric utility impacts and sovereign submerged lands. The law passed this year modifies wetland mitigation credits passed in 2012.

Senate Bill 320 authorized the Fish and Wildlife Conservation Commission to conduct residential conservation programs. It

will provide education and training to the public.

The bill authorized FWC to contract services, hire and train personnel and volunteers, and cooperate with federal, state and local programs of mutual interest.

House Bill 5401 transferred up to 19 officers to the DEP from the Florida Fish & Wildlife Conservation Commission and created a Division of Law Enforcement within the DEP. The law required the two departments to negotiate lines of their respective authority over investigations and handling natural disasters, hazardous spills and oil spills.

HB 7103 required local governments to adopt comprehensive plan and land use development regulations and oversee development orders and permits.

At the same time, local governments are prevented from adopting or imposing mandatory affordable housing requirements.

In new towns, a developer's plans will take precedent over public input. When citizens advocacy organizations challenge a local comprehensive plan, this bill makes the prevailing party's attorney fees the obligation of the losing side.

Failed legislation

Several high profile environmental initiatives failed again this year. Four bills addressing land acquisition trust fund

spending died before passage.

The following environmental bills also failed: a bill to support ecosystem and habitat restoration; a bill requiring connection of septic tank systems to central sewer collection lines; and a bill setting requirements for management of stormwater, freshwater and agricultural discharges.

In addition, a bill that would have authorized extended use of \$50 million appropriated for Hurricane Michael recovery through the 2025-2026 fiscal year failed, as did a similar bill to allocate \$20 million annually to the Apalachicola Bay area of critical state concern through 2030.

Several water quality bills also failed. Two bills, HB 973 and SB 1758, that would have transferred the septic system program from the state Department of Health to the DEP failed.

Another bill to require state regulation of biosolids so as to limit the migration of biosolids' nutrients to waterbodies also failed. This bill was seen as essential to limit nutrient enrichments by biosolid land-spreading disposal in the upper St. Johns River watershed in Indian River County.

A proposal to establish a Blue Star Collection System assessment and maintenance program under DEP also failed. It would have provided incentives for public and private utilities to reduce the likelihood of sewer overflows and unauthorized discharges.

SB 628 would have instituted new requirements for DEP's annual assessment of water resources and conservation lands to coordinate with private and public sector entities. The new requirement would have established a quantitative needs-based evaluation with specific stipulations.

Senate Bill 1344 would have required the state's water management districts and DEP to adopt rules to oversee stormwater quality and quantity including removing nutrients from stormwater discharges.

SB 214 called for the state Department of Health to identify the location and operational condition of all on-site sewage treatment and disposal systems in Florida. In addition, the requirement that septic system be inspected at least once every five years under DOH failed.

A separate bill, HB 497, would have required owners of properties with leaking wastewater lines between a building and a sewer main to be notified, and a record kept of such notifications.

Several bills aimed at restricting fracking and acid stimulation failed again this year. The Legislature also took a pass on establishing a Florida Disaster Resiliency Task Force.

It did not create a new section of Florida Statutes defining a community solar facility and did not pass a law to allow property owners who produce renewable energy on their property to distribute it to adjacent property users.

New laws with environmental impacts
Two laws that passed could do significant long-term damage to Florida's environment, though they are not directly "environmental" laws.

The first, the Florida Department of Transportation's Multi-use Corridors of Regional Economic Significance Program, funded three massive toll road projects stretching from Collier County north to the state border in Jefferson County.

The law provided authorization and a time frame to complete all roads by 2030. Precise routes will be determined.

Environmental activists aggressively opposed this law because the roads will pass through some of the Florida Peninsula's last wild and rural areas. The road plan will promote development, ensuing environmental destruction and the conversion of rural lands to developed areas.

Elsewhere, lawmakers put a rider on the appropriations bill to change the constitutional amendment process, hobbling citizen involvement in Florida's constitutional amendment process.

The Legislature passed a list of draconian signature-gathering requirements that qualify citizen-initiated proposed amend-

25th Annual FLORIDA REMEDIATION CONFERENCE

Nov. 7-8, 2019
**Omni Orlando Resort at ChampionsGate
Orlando, FL**

Call for Abstracts

The FRC conference team is now identifying exciting and relevant talks for presentation at the 2019 conference and we would like to hear from you with abstracts on a variety of topics, including:

- University assessment and remediation-focused research
- Applications of risk-based decision making to assessment and remediation projects
- Brownfield assessment/remediation
- Innovative/creative site assessment strategies; technologies to develop effective conceptual site models
- Addressing the complex site challenge—assessment through remediation
- Combined and/or Phased Remedial Strategies
- Chlorinated solvents, NAPLs
- Emerging contaminants (1,4-dioxane, pharmaceutical personal care products, per- and polyfluoroalkyl substances, etc.)
- Remedial system optimization
- PRP case studies: Assessment and remediation within the state PRP—tools and techniques for ATC success
- Assessment and remediation within the Florida Drycleaner Solvent Cleanup Program
- Vapor intrusion
- Vendor-focused technologies and products (anticipated to be a session with "Speed Talks")
- Regulatory policy and initiatives
- Cleanup case studies of sites and surface water contaminated with petroleum, PCBs, DNAPLs and LNAPLs, chlorinated solvents, arsenic and heavy metals, pesticides, nitrates/nitrites and other contaminants.

In addition, we are considering presenting several sessions featuring open forum discussion on technologies, site assessment techniques and regulatory subjects. If you have a suggestion for an open forum subject, chime in.

Please submit abstract of approximately 250 words by July 15, 2019. Presentations will range from five minutes to an anticipated maximum of 25 minutes in length. Please indicate the topic area your abstract is being submitted for (or provide your own) and your recommendation regarding length of the talk.

E-mail abstracts to Mike Eastman at mreast@enviro-net.com.
For more information, call (407) 671-7777 or visit www.enviro-net.com.

**WANTED:
YOUNG PROFESSIONALS**

**Take the Leap to
Grow Your Career!!!**

"Young Professionals" Session
planned again for FRC 2019

If you will be 35 or younger in
November, 2019, and are interested in
participating in our Young Professionals
Session, please indicate on your
abstract submittal.

We anticipate shorter duration (10-15
minutes) presentations for the Young
Professionals Session with **Cash
Prizes** for the top presentations.

SESSION

Continued on Page 13

USF oceanography research team to test predictive red tide model

By ROY LAUGHLIN

Professor Robert Weisberg, a physical oceanographer at the University of South Florida, has spent decades studying ocean currents and upwellings, particularly close to home along Florida's Gulf Coast.

During the past 15 years, he and several colleagues have conducted interdisciplinary studies to shed more light on the factors that cause red tide blooms and then disperse them across Florida's Gulf of Mexico continental shelf.

The results are coming together in a coherent, potentially predictive characterization of the complex interaction of ocean currents, upwellings and red tide biology that cause the intermittent occurrence of red tide blooms in Florida.

A red tide bloom begins well offshore then moves eastward across Florida's continental shelf. Occasionally, the blooms are so extensive and prolonged, they spread to Florida's Atlantic coast.

The current wisdom is that red tide blooms with offshore genesis may take advantage of nearshore nutrient conditions that could be influenced by contributions from land. But land runoff does not spark red tide outbreaks like it does cyanobacteria blooms in Lake Okeechobee.

The epicenter of red tide bloom genesis is an area northeast of Tampa Bay on the continental shelf. There, the annually variable Gulf of Mexico Loop Current interacts with bottom topography at the continental shelf margin to create an upwelling of nutrient-laden deep water.

Research over much of the past 20 years by scientists including Weisberg found that *Karenia brevis*, a dinoflagellate, depends opportunistically on a set of conducive conditions that promote blooms in that area.

Biologically, those include modest nutrient levels that choke off competition by diatoms that grow faster than red tide under high nutrient levels.

When nutrient upwelling delivery is low, red tide blooms are often initiated with a symbiotic assist from oceanic cyanobacteria that fix nitrogen. The cyanobacteria bloom leads to sufficiently high levels of nutrient nitrogen.

A red tide bloom can then begin at the outer edge of the continental shelf in the absence of diatom competition that quelches it.

There's a paradoxical twist in the cyanobacteria symbiosis. Nitrogen-fixing cyanobacteria bloom when African dust-fall supplies iron as an essential trace element for them, triggering an offshore cyanobacteria bloom.

A red tide bloom typically follows the cyanobacteria bloom, initiated by the nutrient nitrogen available as the cyanobacteria bloom senesces.

Weisberg's recent physical oceanogra-

phy research fills in a big gap, explaining how red tide genesis in upwelling areas at the edge of the continental shelf become red tide blooms close to shore along the Southwest Florida coast.

The offshore waters where red tide blooms begin are typically about 25 meters deep and often have a stratified water column due to a thermocline or pycnocline.

K. brevis populations often occur in mid-depth waters that allow them to be carried shoreward in upwelling currents along the bottom where transport is not visible to satellites or surface observing instruments.

The recent studies that began in 2017 and continued into last year's massive red tide outbreak relied on a glider to assess both shallow- and deep-water *K. brevis* populations as they spread from the main genesis region off Tampa Bay.

The gliders, two-meter-long autonomous instrumented submarines, are uniquely capable of long-term deep-water tracking over a large area.

Data collection with gliders in 2017 and 2018 was a case of being in the right place at the right time to amass a trove of data about deep-water transport during the most recent massive red tide bloom.

The usual upwelling currents are likeliest to carry the red tide organisms east to shallow waters between Tampa and Cape Sable.

Sometimes surface currents, which are primarily wind-driven, will carry the red tide cells further north or entrain them in the Gulf Stream.

In fall, 2018, the Gulf Stream carried the red tide organisms in less than a week to waters between Biscayne Bay and Cape Canaveral along Florida's East Coast.

Weisberg's research has not contradicted the influence of biological factors that scientists began to accurately describe in the 1950s.

The breakthrough was appreciating "the role of the circulation in delivering red tide to the shore ... demonstrated in a 2009 paper," Weinberg noted.

Because upwelling currents are extremely variable in occurrence and velocity, they are a stochastic factor in red tide occurrence and coverage.

The 2017-2018 data gathering showed that upwelling currents are a primary dispersal mechanism from offshore waters to onshore waters.

It capped physical oceanography data about currents and upwelling gathered since 2009.

Combining both the physical data on currents and the 2017-2018 red tide dispersal, Weinberg's research team accurately verified a hindcast model of red tide bloom patterns.

The success of that modeling leads the research team to believe future red tide blooms will be predictable.

line spending. There may still be some surprises and disappointments.

To make that case, consider that the 2019 Legislature considered 3,491 bills, the most filed in a decade, and passed only 197 of them, the lowest number of passed bills since 2010.

The Legislature did increase funding for long neglected water quality projects in South Florida. For that, they deserve some credit.

But land development was fast-tracked on an unprecedented scale that will eventually affect the remaining wild and rural areas of peninsular Florida, specifically those in the northwestern part of the state.

In addition, changes made to the financial costs of challenging development plans in court and obtaining signatures for constitutional amendments could sharply limit voter oversight of the Legislature in the future.

For those reasons, though some significant issues were addressed, 2019 cannot be considered as the year Florida's environment was rescued.

Environmental Services



www.groundwaterprotection.com
2300 Silver Star Rd.
Orlando, FL 32804

Serving Florida and the Southeastern U.S. Since 1986

Environmental Services

- ✓ **Sonic Drilling:** Truck Mounted (2) • Track Mounted (4)
Angled wells and low clearance (14')
- ✓ **Geoprobe Direct Push Technology**
• 66 series (3) • 77 series (1) • 78 series (3)
Indoor/Limited Access Rig (2)
- ✓ **Auger/Mud Rotary**
• Diedrich D-120 (2) • Diedrich D-50 (2)
- ✓ Multiple Injection Applications
- ✓ Well Abandonment with Pad & Vault Removal
- ✓ Angle and Horizontal Well Installation
 - ✓ Electrode Installations
 - ✓ CMT Well Installations
 - ✓ Mineral Exploration

Charles@drillprollc.com • (407) 426-7885 • David@drillprollc.com



Restoring the Past, Safeguarding the Future

**IDW Transportation and Disposal
Soil and Groundwater Remediation
Large Diameter Auger Technology
Arsenic Site Rehabilitation
Vacuum Truck Services
Spill Response**

**Ash Site Remediation
Remedial System Installation
In-Situ Soil Stabilization
Landfill Reclamation
Industrial Waste Cleaning
Roll-off Services**

Contact Us:
Todd Hodgson (800) 771-1050
thodgson@feccorporation.com

Gordon Kirkland
gkirkland@feccorporation.com



SPOTLIGHT GEOPHYSICAL SERVICES

Providing subsurface imaging with land and shallow marine geophysical tools
Experienced and licensed geophysicists based in Miami, Florida
www.spotlightgeo.com

Professional Environmental Testing & Consulting, LLC

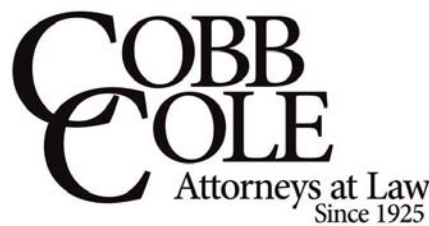
NELAP certified full service laboratory, specializing in microbiology and wet chemistry for potable and non-potable water. Minority Business certified.
Located in Davie, FL • (954) 440-3537
www.petc702.com petc702@comcast.net



Quality Work with a 3-Day Turnaround Time

NELAC Certified OSHA Certified
ADaPT SBE & WMBE for Palm Beach
SBE for SFWMD, Palm Beach Schools and the Florida Office of
County and West Palm Beach Supplier Diversity
Custom EDDS and On-Line Reporting

Palm Beach Environmental Laboratories, Inc.
(561) 689-6701



Full Service Law Firm, Including the Areas of Land Development Law, Environmental Law, and Local Government Law

Michael.Woods@CobbCole.com
386.736.7700

OFFICES IN DAYTONA BEACH & DELAND
149 S. Ridgewood Ave., Ste. 700, Daytona Beach, FL 32114
231 N. Woodland Blvd., Deland, FL 32720

www.CobbCole.com

For additional information or questions regarding this message, please contact Michael Woods, Partner, Cobb Cole

Florida Specifier

Business Card Ads

Ad size	Dimensions	Annual Rate
Single card	2 1/4" x 1 1/8"	\$425
Double card	2 1/4" x 2 1/4" or 4 3/4" x 1 1/8"	\$725
Triple card	2 1/4" x 3 1/2"	\$1,025
Quadruple card	2 1/4" x 4 1/2" or 4 3/4" x 2 1/4"	\$1,225

Keep your company in front of thousands of environmental professionals every month at extremely cost-competitive rates. Call (407) 671-7777.

SESSION

From Page 12

ments to the Florida Constitution.

The new rules affect signatures collected by paid collectors, decreasing the number of people who will be available to collect signatures, and significantly decreasing the interval between signing and submission to county registrar of voters for verification.

These new requirements are aimed at—and likely will significantly lower—the number of qualifying petitions by increasing the costs of obtaining the needed number of signatures.

Environmental initiatives are typically promoted by coalitions that do not have deep pockets for signature gathering and verification.

Voter-initiated constitutional amendments have been the only way during the past decade for the public to obtain fair and effective environmental legislation.

In summary

This story was completed before the governor's opportunity to veto bills and red

Largo officials continue to address wastewater treatment system deficiencies

By **BLANCHE HARDY, PG**

The city of Largo's new \$19.5 million wastewater facility is not performing up to expected standards. The year-old system is dogged by design flaws, according to city engineers.

The city has completed a number of projects to improve its wastewater treatment facilities over the past few years. Many of the actions were undertaken to comply with a Florida Department of Environmental Protection consent order that has been amended five times.

The city is now working to address the current order to reduce the amount of sewage discharge and sanitary sewer overflows into local waterways.

As recent as January, the city authorized an additional \$3 million in funding for sewer system, reclaimed water system and stormwater infrastructure repairs.

Managers are now considering options to address the deficiencies in their wastewater treatment system.

The initial DEP consent order was issued in the spring of 2006. In it, the city agreed to resolve issues related to bromodichloromethane in wastewater reclamation facility effluent and the related discharge of millions of gallons of wastewater to waters of the state.

The 2006 order was amended in 2009, requiring corrective actions to address wastewater effluent deficiencies by mid-2012, the period of the term of the city's wastewater treatment permit. As in the previous order, the amendment was issued to reach water quality criteria for bromodichloromethane.

In September, 2012, DEP issued the city a second amendment to the order, requiring the reduction of bromodichloromethane concentrations to water quality

standards by May 1, 2016.

City and state officials met regularly to discuss the progress of city projects including the replacement of the wastewater facility disinfection system and related wastewater management actions.

It became apparent that additional time was needed to complete improvements. The treatment process for sewage entering the facility was inadequate and required redesign and retrofit to meet anticipated peak flow rates.

Design and implementation planning for the needed improvements were coordinated with DEP whose representatives conducted field observations authorized under the consent order and amendments that were undertaken to address wastewater treatment deficiencies.

As a result of the site visits, a third amendment to the consent order was issued extending the project timeline to 2018.

DEP then granted the city the opportunity to complete these projects and operate them through the 2018 wet season under a fourth amendment to the order.


City records indicate that the fourth amendment "extended the consent order to January 31, 2019, and increased the required bromodichloromethane effluent interim limit to no more than 42.7 micrograms per liter and lowered the dissolved oxygen effluent interim minimum limit to no less than 3.5 milligrams per liter."

An additional amendment to the consent order is anticipated as the result of the expiration of a related administrative order to address the total nitrogen loading to Tampa Bay.

The city's wastewater treatment facilities are exceeding their regulatory limits

LARGO
Continued on Page 15

Environmental Services



ENVIRONMENTAL DRILLING SERVICE inc.

*Celebrating 28 Years of Service
1989 - 2017*

**Auger, Rotary, Sonic, Geoprobe Truck
and ATV-Mounted Services Statewide**

Phone: (407) 295-3532 • E-mail:
Doug@edsenvironmental.com
www.edsenvironmental.com

FEDFILE From Page 2

gas first became dominant over coal in electricity generation.

Those first months of dominant natural gas electricity production were also likely due to seasonal factors. But by last year, natural gas fueled 35 percent of U.S. electricity production while coal's share dropped 27 percent.

The EIA expects coal's share to continue its fall, soon to rank third behind natural gas and renewables.

New guidelines for financing drinking water infrastructure. Recently, the EPA issued new guidance that states should use when applying for financing from drinking water state revolving funds. The changes reflect recent legislation, the 2018 America's Water Infrastructure Act.

That act increased additional subsidies available to disadvantaged communities; allowed set-asides to include source water protection activities and source water assessment; extended American iron and steel provisions through federal fiscal year 2023 for DWSRF-funded projects; and increased the loan term up to 30 years for any DWSRF-eligible community.

The length of loan terms increased up to 40 years for loans to state-defined disadvantaged communities.

America's Water Infrastructure Act also updated maintenance and repair requirements for aging water infrastructure.

New TSCA rule aims for transparency. The EPA proposed a new rule under the Toxic Substances Control Act that outlines specific "confidential business information" review procedures to establish what information about chemical identity can be considered confidential.

This affects what information provided to the EPA by chemical manufacturers, importers and vendors can be declared CBI and thus not available to the public.

The EPA press release noted that the scope of this rule is specific and limited. It covers only CBI claims for specific chemical identities reported as "active" under the TSCA Inventory Notification Rule.

The majority of TSCA inventory chemicals are inactive. The EPA has been making an effort to weed these out of its database.

The current rule affects TSCA inventory chemicals that are active in U.S. commerce. "Active" is defined as manufactured or processed during the 10-year period ending June 21, 2016.

Under the prior rule, industries were given the privilege to claim confidentiality of a specific identity of those active chemicals without further substantiation.

The new rule would require that claimants must substantiate CBI confidentiality using an electronic reporting process.

The Frank R. Lautenberg Chemical Safety for the 20th Century Act requires the EPA to establish a final rule for CBI review by Feb. 19, 2020.

Once the rule is passed, the CBI reviews covered by it must be completed by Feb. 19, 2024.

The new rule also addresses time frames for EPA review completion and annual posting of results to date.

The proposed CBI rule was announced Apr. 10 and will be open for public comment for 60 days following publication in the Federal Register. For more information, visit www.regulations.gov.

More TSCA news: 40 chemicals prioritized for risk evaluation. The EPA announced the selection of 40 more chemicals to begin the prioritization process—the initial step of reviewing chemicals currently in commerce.

This round of selection marks a substantial step towards increasing chemical review rates, a significant TSCA reform amendment in the Lautenberg Act.

In a press release, Alexandra Dapolito, assistant administrator for EPA's Office of Chemical Safety and Pollution Prevention, said that "initiating a chemical for high or low prioritization does not mean EPA has determined it poses unreasonable risk or no risk to human health or the environment; it means we are beginning the prioritization process set forth in Lautenberg."

Releasing a list at this stage provides an opportunity for the public to submit relevant information. Each chemical has a docket to be published in the Federal Register followed by a 90-day public comment period. By Dec., 2019, the EPA will designate 20 chemicals as high-priority and 20 as low priority.

The agency has completed one cycle under this new classification process. Formaldehyde is one chemical that was identified as high priority. It and 19 other chemicals designated as high priority will begin a three-year risk evaluation process, while those 20 placed in the low priority category will receive no further risk evaluation.

Hoover Dike work nears completion. In mid-April, the U.S. Army Corps of Engineers awarded a contract to Kiewit Infrastructure South in Orlando for replacement of the S-284 culvert.

The structure is on the northwest section of the dike along Harney Pond Canal in Glades County. It provides drainage and flood reduction to landowners in the area.

This is the 26th and final water control structure crossing the Herbert Hoover Dike that will be replaced under the ongoing rehabilitation project. The Hoover Dike has been under reconstruction since 2001.

This dike construction project received more funding than any other in the nation, more than \$1 billion. In 2018 alone, the corps allocated \$514 million provided by the 2018 Bipartisan Budget Act.

The state of Florida contributed \$100 million to ensure rehabilitation was completed by 2022.

In addition to replacing or abandoning water control structures, the project has been constructing cut-off walls, armoring and raising embankments, and performing other dike upgrades to ensure that the dike does not fail, especially after heavy rain events.

U.S. Environmental

Your source for RENTALS, SALES, & SERVICE

Our device & data experts are ready to provide the **BEST** rental experience possible!

Photo Ionization Detectors	Mercury Vapor Analyzers	Gas Detection Tubes	Well Development pumps
Dust Monitors—Area	Radiation	Sound	Peristaltic Pumps
Weather Stations	Leak Detection	Thermal Imaging	Submersible Pumps
Remote Data Acquisition	Air Pressure	Water Level Meters	Water Sampling
Combustible Gas Monitors	Air Sampling	Interface Probes	Soil Sampling
Flame Ionization Detectors	Anemometers	Pressure Transducers	XRF Analyzers
Gas Analyzers	Dust Monitors—Personal	Flow Probes	and so much more...
Landfill Gas Monitors	Indoor Air Quality	Multiparameter Devices	

Tampa, FL (813) 628-4200 Also convenient locations in MA, CT, NJ, & IL!

Providing quality drilling services with quality people and equipment



Environmental drilling • Exploration
Geotechnical drilling • Wire line coring
All terrain and barge rigs • Sonic

(352) 567-9500 • Toll-free: 1-800-487-9665
www.hussdrilling.com

GPR Services

- Private Utility Markouts
- Ground Penetrating Radar (GPR)
- Concrete Scanning with GPR
- Pre-Excavation Utility Clearance
- Geophysical Investigations



Drilling Services

- Best Remote Access Equipment in South Florida!!
 - Remote 420M Dolly Probe 23" Wide
 - EP200 Auger Rig Only 36" Wide
 - Monitoring Wells Installations
 - DPT Geoprobe Sampling
 - Hollow Stem Auger (HSA) Drilling
 - Call Us Today for Competitive Rates!!
- Deeefield Beach, FL • Mount Laurel, NJ
(800) 596-7472 • www.enviroprobe.com

AECOM

a Leader in Florida and around the World

Florida Offices	Environmental	Water Resources
Bartow	Assessments	Stormwater
Boca Raton	Mitigation Design	Groundwater
Coral Gables	Remedial Design	Water Quality
Fort Myers	Brownfields	Water Management
Jacksonville	Permitting	Potable Water
Miami	Industrial Hygiene	Wastewater
Orlando	Health & Safety	Reclaimed Water
Tallahassee		ASR
Tampa		Coastal Resiliency
West Palm		

www.aecom.com

ERMI

Environmental Risk Management, Inc.
Licensed Engineering & Geology Firm
Site Assessment • Remediation
Fort Myers • Tampa • Jacksonville

Phase I & II ESA, RBCA,
Consulting and Forensics

Steve Hilfiker | President
1-888-ENV-MGMT • info@ermi.net
www.ermi.net

Serving Florida since 1999



Catherine Katsikis
President/Principal Scientist

LDCFL-NAOS Consulting, LLC
Training - Audits - Data Validation - QA Support

Training:
Ethics and Data Integrity
Corrective Action/Root Cause
Quality Systems ... and more

Internal Laboratory and Field Audits
QA Management and Technical Support
ADA/PT/ADR Validation and Training
Laboratories and Field System Start-up
3rd Party Data Validation
3rd Party Laboratory and Field Audits

catherinekatsikis@gmail.com
(561) 512-9956

Kissimmee, KUA forge solar deal

By PRAKASH GANDHI

The city of Kissimmee has taken a big step forward in promoting solar energy, shooting to become the first in Florida to power all of its government-owned facilities with solar.

The city commission recently approved a partnership with the Kissimmee Utility Authority to power all its facilities with solar energy starting next year.

The partnership allows the city the chance to secure a fixed energy rate for the next 20 years, independent of the fluctuating costs associated with typical power generation.

By next year, 100 metered locations—including city hall, the police department and all street lights within the city limits—will operate through the program.

The agreement does not require the city to make any capital investments or long-term commitments.

Chris Gent, a spokesman for KUA, said the city can opt out as soon as 30 days after signing up or can participate as long as 20 years.

KUA joined the Florida Municipal Solar Project in 2018, a large-scale solar project that will enable KUA to provide renewable energy to its customers in the most cost-efficient way, Gent said.

He said there are many benefits from the program.

“More than half of our customers are renters and they can take advantage of the solar system without paying for installation on their homes,” he said.

“All the different buildings were not designed to have a huge solar grid on their roofs,” he said. “By signing up, you don’t have to do that.”

Solar energy costs about four cents per kilowatt hour through the new program, while traditional energy currently costs about 2.6 cents per kWh.

It’s projected to add \$56,300 to the city’s energy costs during the second half of 2020 and \$112,600 for the first full year in 2021.

USDA seeks proposals to protect wetlands

Staff report

The U.S. Department of Agriculture is making available up to \$40 million nationally in technical and financial assistance to help eligible conservation partners voluntarily protect, restore and enhance critical wetlands on agricultural lands.

Restored wetlands improve water quality downstream and improve wildlife habitat, while also providing flood prevention and recreational benefits to communities.

“These locally-led partnerships are instrumental in achieving greater wetland acreage and maximizing their benefits to farmers, ranchers and the local communities where wetlands exist,” said Matthew Lohr, chief of USDA’s Natural Resources Conservation Service.

Proposals can be emailed to sm.nrcs.wre@wdc.usda.gov by June 14, 2019.

LARGO

From Page 14

for other constituents of concern as the result of operational changes in the treatment method and anticipated treatment system construction, which could affect the system’s ability to meet current permit limits.

Largo staff noted that DEP “approved new interim limits for bromodichloromethane (no more than 57 micrograms per liter), phosphorous (no more than 3.0 milligrams per liter for a single sample and 2.5 milligrams per liter for a weekly average), carbonaceous biochemical oxygen demand (maximum 24 milligrams per liter for a single sample), and total nitrogen loading to Tampa Bay (maximum 30 tons for an annual average and 22 tons averaged over five years).”

An extension of the compliance deadline is anticipated. The new deadline is expected to coincide with the new permit renewal date of Oct. 25, 2022.

But the deal is still more affordable than if the city chose to buy, install and maintain its own solar panels.

“The city saw the importance of maintaining a consistent cost on what they spend on energy,” Gent said. “The city is locking in a fixed rate over the life of the contract and it won’t have to deal with infrastructure issues.”

The energy will come from three new solar farms with a combined 900,000 solar panels in Orange and Osceola counties.

KUA and the 11 other electric companies don’t have to pay to install or maintain the solar panels. Instead, they only purchase the energy they need.

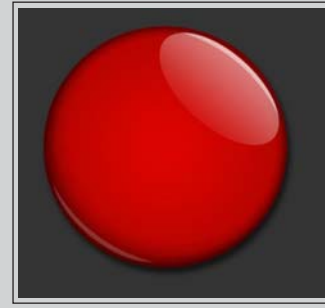
KUA is in a 20-year fixed rate through the Florida Municipal Solar Project, with the option to renew for another 10 years after that.

“This is a way to supply energy to our customers without building power plants that can be a long and costly process,” Gent said. “If we can avoid having to do that, it saves everybody time and money.”

KUA has already committed about 10 percent of its entire solar project to the city.

The solar project is the latest effort by Kissimmee to find green energy solutions.

You asked for it.
You got it.



Digital Access

to monthly issues of the *Florida Specifier* on-line for paid subscribers and clients.

www.enviro-net.com



10th Annual Charity Golf Tournament

Wednesday, Nov. 6, 2019

ChampionsGate Golf Club
Orlando, FL

Special Thanks to our 2019 Signature Sponsor:



www.aellab.com



Contact Information

Player 1 (contact):

Company:

Address:

City, St, Zip:

E-mail:

Phone:

Additional players in foursome:

Player 2 E-mail

Player 3 E-mail

Player 4 E-mail

Single player registration: \$195. Foursome: \$695. If you’d like to take advantage of the foursome discount, please submit payment in full. Player spots will not be held without payment. All payments will be processed immediately. **(Checks payable to NTCC Inc.)**

The deadline for ordering tournament t-shirts is Oct. 1, 2019.

- 12:00 PM Shotgun start, four-man scramble
- Contests, door prizes and silent auction
- Sponsorships available
- Registration includes golf, box lunch and BBQ dinner
- Play one of the very best courses in Florida
- You do not have to attend FRC to participate in tourney

All proceeds to:
The Gift of Swimming
Drowning Prevention for Kids



www.giftofswimming.org

Payment information

Check (made to NTCC Inc.) or CC: AmEx Visa Mastercard

Cardholder :

CC #:

Exp.: / Sec. Code: CC Zip:

Sponsorships

- Regular Holes: \$250 (Additional \$100 for table at tee)
- Contest Holes: \$375 (Additional \$100 for table at tee)
- Closest to Pin/Men Closest to Pin/Ladies
- Longest Drive/Men Longest Drive/Ladies
- \$300: Beverage Cart (three available)
- \$350: Box Lunch (two available)
- \$400: BBQ Dinner (four available)
- \$400: Trophy (one available)
- \$750: Golf Cart GPS Yardage Screen Logo (one available)
- Donation to: **The Gift of Swimming** Amt. \$

Mulligans

Mulligan packs: \$25. Number of packs: Amt. \$

Mail to: 2019 FRC Golf Tournament Total:
P.O. Box 2175
Goldenrod, FL 32733

FAX form to: (321) 972-8937 or E-MAIL to: mreast@enviro-net.com
Questions? Call Mike Eastman at FRC, (407) 671-7777.

FORCE
From Page 1

build upon DEP's basin management action plan initiatives.

The task force will also review and prioritize projects that will accomplish the greatest and most meaningful nutrient reduction in key waterways.

The newly appointed members include: Dr. Wendy Graham, Dr. Evelyn Gaiser, Dr. Michael Parsons, Dr. James Sullivan and Dr. Valerie Paul.

Graham is the Carl S. Swisher Eminent Scholar in water resources and director of the Water Institute in the University of Florida Department of Agricultural and Biological Engineering.

She holds a bachelor's degree in environmental engineering from the University of Florida and a PhD from the Massachusetts Institute of Technology.

Gaiser is an aquatic biologist at Florida International University whose research lab has informed the progress of Everglades restoration and is integrated into the Florida Coastal Everglades Long-Term Ecological Research program, which she has led since 2007.

She holds a bachelor's degree in biology from Kent State University, a master's in animal ecology from Iowa State University and a doctorate in ecology from the University of Georgia.

Parsons is a professor of marine sci-

ence at Florida Gulf Coast University and director of the Coastal Watershed Institute and Vester Field Station. He was a State of Louisiana Board of Regents Fellow and received a doctorate from Louisiana State University in biological oceanography.

Sullivan, executive director of Florida Atlantic University's Harbor Branch Oceanographic Institute, is an expert on marine ecosystem health.

He earned master's and doctorate degrees in biological oceanography with specializations in phytoplankton physiology and ecology, as well as bio-optics and biophysics, from the University of Rhode Island Graduate School of Oceanography.

Paul has served as director of the Smithsonian Marine Station in Fort Pierce since 2002. She received a bachelor's degree from the University of California San Diego with majors in biology and chemical ecology and a PhD in marine biology from the Scripps Institution of Oceanography at the University of California San Diego.

"I am excited to join Gov. DeSantis in announcing these five prominent environmental researchers to the Blue-Green Algae Task Force," said DEP's Valenstein. "By bringing together these scientific leaders, I am confident we will continue to move forward with the governor's bold vision to achieve more now for Florida's environment."

The event was somewhat marred by the son of Nathaniel P. Reed. Adrian Reed ini-

tiated the event with a scathing rebuke of the former South Florida Water Management governing board members.

"It is no secret and is well known that a small but richly powerful group of special interests have imposed their will over our state and the mechanisms of its government, like the South Florida Water Management District board," he said. "These special interests have pursued a passage of selfishness and greed."

Former Florida Gov. Rick Scott appointed the SFWMD board members mentioned by Reed. Scott now sits as a Florida senator in governance of our nation.

NOTES

From Page 1

The company submitted its application for inclusion in the Technology Library for Water Issues through the DEP's Division of Environmental Assessment and Restoration and Division of Water Resource Management. The library is an innovative technology list for environmental solutions.

According to the company, the patented plasma arc technology is proven to kill cyanobacteria and can reduce and even eliminate the toxins released by the bacteria, and reduce the associated nutrient levels that trigger toxic blue-green algae blooms.

Inclusion on the DEP library is not an endorsement by the state, but it is an important prerequisite for the firm to be able to begin marketing its solutions to impacted municipalities in Florida, according to company officials.

People news. Michelle Rau was named president and chief executive officer of ANAMAR Environmental Consulting. Rau has been with ANAMAR since 2002.

She holds a bachelor of science degree in natural resource conservation and a masters degree in soil and water science from the University of Florida.

West Palm Beach-based civil engineering and land surveying firm Engenuity Group Inc. appointed Jennifer Malin, PSM, director of their surveying department, as a new principal. She is the fifth principal at the firm.

Malin started her career with Engenuity Group after graduating from the University of Florida in 2003.

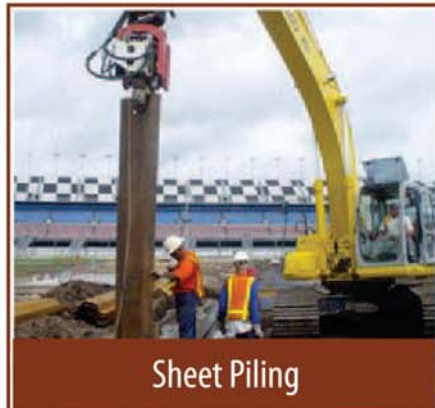


CARBONWORKS
Environmental Water and Vapor Treatment
Rental, Sales, Service

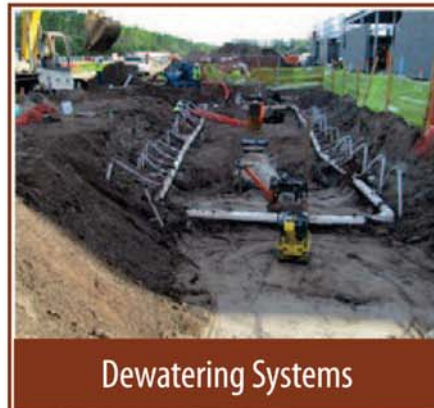
(904) 352-0536
www.carbonworks-usa.com

RC Development Group Inc.

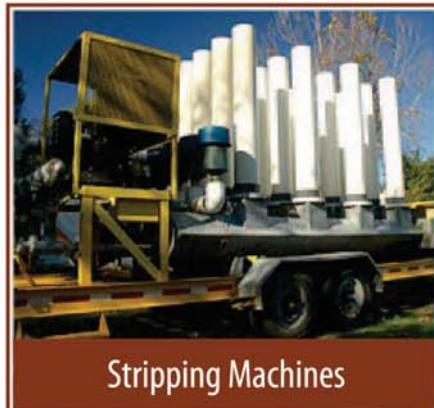
OSHA CERTIFIED REMEDIATION SUB CONTRACTOR



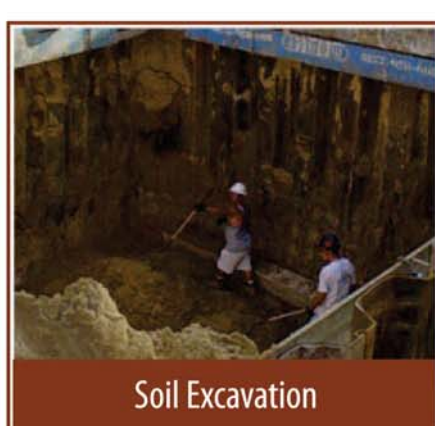
Sheet Piling



Dewatering Systems

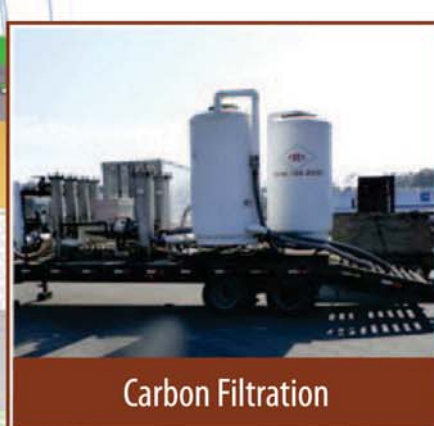


Stripping Machines



Soil Excavation

QUALITY
ACCOUNTABILITY
STATEWIDE SERVICES



Carbon Filtration



Groundwater Treatment Systems



Site Restoration



Tank Removal

Index to Display Advertisers

Advertiser (Florida Representative)	Page
ADVANCED ENVIRONMENTAL LABS URL/E-mail (if available) (904) 363-9350 www.aellab.com	3 (904) 363-9354
AQSEPTENCE GROUP (AIRVAC) (813) 855-6297 www.airvac.com	2
BEE MATS (386) 428-8578 www.beemats.com	8 (386) 428-8879
CARBON SERVICE & EQUIPMENT CO. (407) 313-9113 www.carbonservice.net	6 (407) 313-9114
CARBONWORKS (904) 352-0536 www.carbonworks-usa.com	16
CHEROKEE ENTERPRISES (305) 828-3353 www.cherokeecorp.com	9
CLARK ENVIRONMENTAL 1-800-276-2187 www.thermal-treatment.com	9 (863) 425-2854
CLEAN EARTH (941) 723-2700 www.cleanearthinc.com	10
CUSTOM DRILLING SERVICES 1-800-532-5008 www.customdrilling.net	4 (863) 425-9620
ETEC LLC (971) 222-3616 www.etecllc.com	10
FAEP www.faep-fl.org	11
FLOWERS CHEMICAL LABS (407) 339-5984 www.flowerslabs.com	4 (407) 260-6110
GEO PROBE SYSTEMS (785) 825-1842 www.geoprobe.com	6
HANDEX (321) 441-9801	9
HORIZON ENVIRONMENTAL SERVICES (888) 815-9119 www.horizonllc.com	3
INTEGRATED ENV. TECHNOLOGIES 888-721-8238 ellen.devlin@iet-inc.com	2
JAEE ENVIRONMENTAL SERVICES (954) 476-8333 www.jaeenvironmental.com	9 (954) 476-8347
PREFERRED DRILLING SOLUTIONS 1-866-251-1747 www.siremlab.com	7
RC DEVELOPMENT (904) 294-0799 rcdevgroup.com	16
ST. JOHNS RIVERKEEPER (904) 256-7591 www.stjohnsriverkeeper.org	14
UNIV OF FLORIDA TREEO CENTER (352) 392-9570 www.doce.ufl.edu/treeo	11 (352) 392-6910

Building Contractor: CBC 1250664 | Tim Combs: 904-294-0799 | 10418 New Berlin Rd. Bldg. 204 Jacksonville, FL 32226 | Pollutant Storage Contractor: PCC 050650