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Volume 40, Number 2

Lee County contamination 7

Officials in Lee County discovered high levels of arsenic at the Pine Island Flatwoods Preserve in St. James City. Concentrations of arsenic detected in groundwater samples reached levels of up to 30 times the federal limit.

Jax incinerator ash cleanup 7

Cleanup is underway on Jacksonville's Southside waste incinerator contamination. The project includes the "dig and haul" of 32,000 tons of contaminated soil.

Wetlands permitting 8

DEP is poised to take over responsibility from the Army Corps and EPA for issuing Section 404 wetland permits under the federal Clean Water Act.

Surface water quality 10

Earlier this year, DEP announced the withdrawal of its 2016 Surface Water Quality Standards, the most recent amendments to Chapter 62-302.530.

Potable reuse group 13

The Florida Potable Reuse Commission has been established to identify and address technical, regulatory and implementation barriers to potable reuse of wastewater in Florida.

LAKEWATCH decision 16

DOAH ruled in early February that DEP has the discretion to use water quality data from LAKEWATCH analyzed under an alternative quality assurance plan.

Departments

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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 (407) 671-7757, or email mreast@enviro-net.com.

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Photo courtesy of U.S. Army Corps of Engineers, Jacksonville District

U.S. Army Corps of Engineers scientists survey and identify wetland plants as biological indicators of a wetland subject to protection under the Clean Water Act. Surveys by corps scientists are likely to become a thing of the past in Florida. A bill passed by the Florida Legislature authorizes the Florida Department of Environmental Protection to assume federal Section 404 wetland permitting from the corps. See story on Page 8.

State of the Industry:

Environmental, geotechnical drillers running hard to keep up with steady demand

By ROY LAUGHLIN

Going into 2018, the Florida drilling industry continues to maintain its upward trajectory that began accelerating in 2016.

Drilling company officials report full calendars and abundant projects across the state from Pensacola to South Florida.

"The general trend is getting back to the normal business cycle," said Ross Chinander, president of National Environmental Technology Inc. in Dover.

Rigs idled after the 2008 recession are up and running again. Drillers who said last year they were considering buying additional equipment did so and the newly-acquired rigs are now in use.

Comments from the drilling company officials we interviewed indicated that remediation drilling activity has not yet reached the level it attained during the first decade of the 2000s.

But geotechnical and environmental assessment drilling has increased markedly over the last year, more than filling the gap for drillers whose contracts were primarily for remediation projects.

Environmental remediation projects that require monitoring wells were mentioned by several company officials with major environmental drilling portfolios as the dominant component of their recent work load.

This subtle shift likely reflects activity in the Florida Department of Environmental Protection Petroleum Restoration Program's Low-Scored Site Initiative.

Using risk-based rather than contamination standards, LSSI's goal is to rapidly move minimally-contaminated sites to the "no further action" list.

The LSSI effort is working.

For the first time in at least a decade, at the end of 2017, the PRP lists more closed sites than sites receiving or awaiting assessment or treatment.

What's more, PRP's timely pay-

ments to contractors are now a bright spot, conspicuous in comments from several drillers.

Most drillers report being paid in about 60 days by their prime contractors who depend on receiving PRP payments before paying their subcontractors.

Geotech, assessment drilling

These two categories are now at least as important as remediation project drilling for most of the companies we interviewed.

"A big horse" is how Chad Camp-

bell, president of Largo-based Preferred Drilling Solutions Inc., described it.

Fred Kaub, president of GFA International Inc. in Delray Beach, said this category is the most significant both in terms of dollars and in scope of work.

His company's portfolio includes U.S. Army Corps of Engineers projects around Lake Okeechobee and elsewhere.

Kaub also pointed to Phase 1 and

DRILL
Continued on Page 5

Miami-Dade may pipe wastewater to Turkey Point cooling canals

By BLANCHE HARDY, PG

A new wrinkle has developed in Florida Power and Light Co.'s effort to manage its many miles of cooling canals adjacent to the Turkey Point Nuclear Generating Station in Miami-Dade County.

Miami-Dade Mayor Carlos Gimenez proposed to use the county's treated wastewater to augment water in Turkey Point's troubled 5,900 acres of cooling canals.

The proposal cleared committee in March allowing it to move forward to the entire county commission for consideration.

The county would benefit greatly from the deal by achieving compliance with a 2025 state deadline to cease offshore disposal of effluent and to achieve 60 percent wastewater reuse.

The mayor's proposal would provide FPL with 60 million gallons a day of wastewater, roughly half the county's regulatory obligation.

"In 2008, legislation was passed requiring all wastewater utilities in Southeast Florida utilizing ocean outfalls for disposal of treated wastewater to reduce their discharges by 2018, cease using the outfalls by 2025 and reuse 60 per-

cent of their wastewater flows by 2025," said Miami-Dade District 7 Commissioner Xavier Suarez.

"The ocean outfall legislation requires the county to eliminate 117.5 mgd of ocean outfall by the year 2025," he continued. "In effect, this means that the county will have to figure out a way to abolish long outfalls."

TURKEY POINT
Continued on Page 12

Rob Wallace, PE, 65

We lost one of our own in February. Rob Wallace died at the age of 65.

A 1974 graduate of the University of South Florida with a BSE, Rob was founder and president of Environmental Engineering Consultants Inc. in Tampa.

From 1994 to 2002, Rob served in the Florida House of Representatives for District 47 in Northwest Hillsborough and Northern Pinellas.

Some of Rob's more notable

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EPA releases 2017 enforcement activity report

Staff report

In its annual survey of enforcement results for fiscal year 2017, the final fiscal year of the Obama administration, the U.S. Environmental Protection Agency highlighted enforcement settlements that included site remediation and criminal enforcement results.

With respect to enforcement, EPA efforts led to an increase of incarceration time to 150 years and a total criminal fines, restitution and mitigation increase to \$2.98 billion. The agency listed \$1.6 billion in administrative and civil judicial penalties.

EPA also cited “an increase in the value of actions” to nearly \$20 billion to improve compliance with the law and reduce pollution.

The report highlighted enforcement actions that included Volkswagen’s agreement to pay \$2.8 billion in criminal fines; Fiat Chrysler, which like VW programmed software to misrepresent

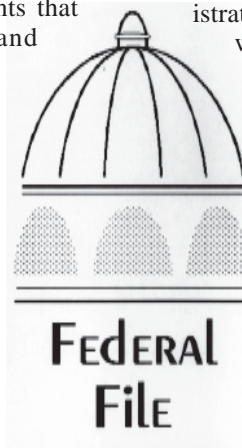
the emission compliance of 104,000 light duty diesel vehicles; Tyson Poultry Inc.; Whole Foods Market and StarKist Co. in American Samoa.

Formal action for these cases started in 2015–2016 under the Obama administration. Going forward, the agency will likely be responsible for a lower level of enforcement.

The Environmental Integrity Project reported that during its first nine months, the Trump administration filed 33 civil cases and collected \$14 million in federal penalties—half of the average of 62 cases filed during the first nine months of the last three administrations.

At the same time, it has lodged 48 civil cases against polluters seeking a total of \$30 million between Jan. 20, 2017, and Jan. 20, 2018—44

percent fewer cases and 49 percent less penalties than during the last three administrations.



Latest Toxic Release Inventory. Air and water emissions continued their decade-long decline, but solid waste levels increased again, according to the 2016 Toxics Release Inventory just released.

The net result is that in 2016, 28 billion pounds of chemical waste, 87 percent, were not released to the environment. In 2015, 26 billion pounds, 92 percent of the total wastes produced, were not released to the environment.

The increased total waste release in 2016 is due to an increase in solid waste, dominated by solid wastes disposed of on land.

Wastes released to land continue to be dominated by metal mining wastes.

Overall, air emissions were down about 11 percent, approximately 60 million pounds. Surface water discharges decreased about 10 million pounds compared to 2015.

Last year, the EPA instituted a new portal to give open access to TRI data over the past decade. This year, the EPA improved it further.

It gives waste totals by medium: air, water or land. It also presents a detailed discussion of specific substances including lead, mercury and dioxins in the three different media.

Major air sources rule. In late January, EPA rescinded its “once-in always-in” policy for major sources under the Clean Air Act, the 1995 policy that applies to a facility that emits substantial quantities of hazardous air pollution.

The agency defines a major source as one that emits 10 tons annually of a single hazardous substance or more than 25 tons annually of a combination of hazardous air pollutants.

Even if a facility makes process changes or installs emissions controls, the EPA continues to designate the facility as a major source and apply stricter emission limits.

The new policy proposes relisting major source facilities whose emissions fall below the major source thresholds as “area sources,” a designation that often subjects the facility to lower standards.

It is possible for a facility with the change in designation to return to higher air emissions at least temporarily until the EPA reclassifies it to a category with stricter standards.

The agency justified the new policy by noting “that EPA had no statutory authority under the Clean Air Act to place a time limit on when a facility may be determined to be an area source, and that a plain language reading of the Act must allow facilities to be reclassified as area sources once their potential to emit hazardous air

FEDFILE
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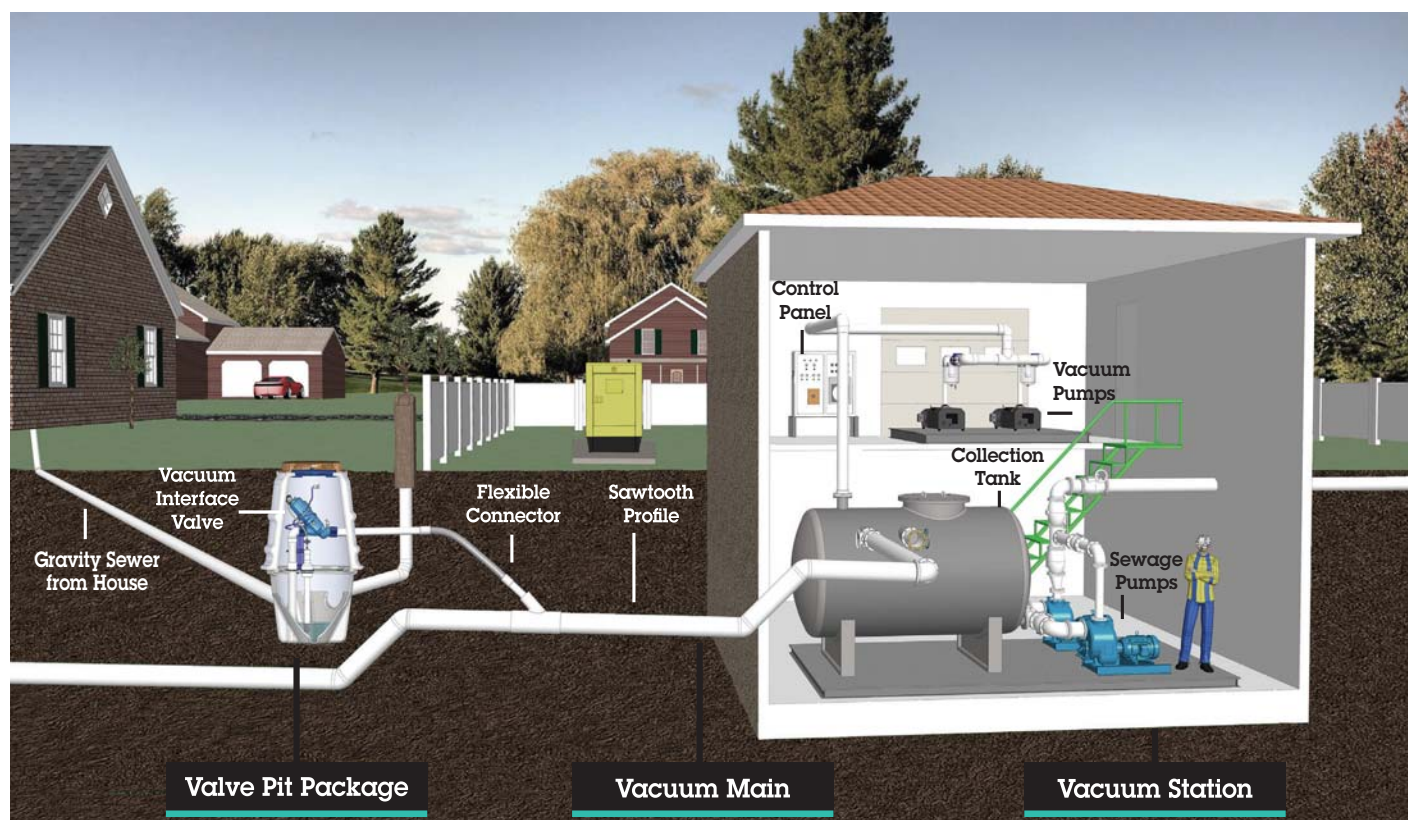


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Advocacy groups fight U.S. Army Corps' approval of phosphate mining permit

Staff report

In February, four environmental advocacy groups filed an appeal to the 11th Circuit Court of Appeals challenging a lower court decision to uphold a U.S. Army Corps of Engineers' permit allowing more than 50,000 acres in Central Florida to be mined for phosphate.

The Center for Biological Diversity, ManaSota-88, People for Protecting Peace River and Suncoast Waterkeeper are hoping to overturn the permit approval.

They claim the project threatens freshwater resources by allowing the unchecked growth of phosphogypsum stacks and would lead to the destruction of wetlands and habitat for already vulnerable wildlife.

The proposed project is in the Bone Valley region of Central Florida and includes parts of Hardee, Hillsborough, Manatee and Polk counties.

"Florida's citizens have had enough of the phosphate industry putting our aquifers at risk and decimating habitat for our wildlife," said Jaclyn Lopez, Florida director at the Center for Biological Diversity in St. Petersburg. "The corps' failure to analyze these threats is unlawful and will devastate nearby communities."

CBD officials said that Florida is already home to more than one billion tons of radioactive gypstacks and the proposed project would add approximately half a billion more tons.

Fort Myers sludge. The city of Fort Myers disposed of toxic wastewater sludge from their treatment plant on a Dunbar-area field for 55 years.

The city will now clean it up by removing the contaminated soil and sediment at a cost of up to \$17 million.

The Florida Department of Environmental Protection issued a letter to city officials in February providing details of the steps they must take to initiate the cleanup effort.

Before any excavation can occur, the city must provide written notification to DEP describing the type of contamination, the estimated volume of soil and sediment to be removed and the proposed method to be used to dispose of the wastes.

The city's plan must receive department approval before being implemented.

In addition to the sludge removal, the city must demonstrate that the high levels of arsenic present in the soils and groundwater adjacent to the site did not result from the city's sludge disposal.

Both on-site and off-site testing for arsenic are required. The schedule for the cleanup work has not yet been determined.

BS Ranch compliance issues. An organic recycling facility in Polk County is in the process of negotiating resolutions to three outstanding DEP permit compliance issues.

Complaints about odors generated by BS Ranch & Farm operations have been piling up since 2017. The facility processes human waste, out-of-date foods and mulch.

It was cited in 2017 for permit-related odor violations. Polk County subsequently sued the company seeking to close down operations that it had previously approved.

Enclosures are now being considered to manage odors as well as treatment of the enclosure-generated gases prior to exhaust.

DEP is also seeking restoration of over five acres of impacted wetlands to their original grades and vegetation levels.

BS Ranch is required to submit monitoring reports to demonstrate that the wetlands have been restored and revegetated to a condition comparable to the composition and density present prior to construction of the facility.

Indian River eco-district. Franks Energy LLC assembled a consortium of investors and developers including Washington DC-based Grid Energy Services to create an eco-district at their recently acquired

Indian River bio-refinery.

The site received \$200 million in infrastructure capital improvements including the construction of an industrial biofuels production plant with on-site power generation equipment and a interconnection to Florida's electricity grid.

The consortium hopes to convert the bio-refinery site into an eco-district by hosting a series of businesses focused on environmental sustainability.

The Vero Beach site is located next to the Indian River County Landfill.

The consortium is considering businesses that could generate energy from the landfill gas as well as businesses that could create a utility scale solar PV operation.

They are also exploring the possibility of recycling businesses for items such as liquid effluent, wood wastes and cement.

Disney solar. Walt Disney World currently operates a Mickey Mouse-shaped solar farm and they are now in the process of building another, much larger solar facility.

The existing five-megawatt, 22-acre Hidden Mickey solar farm near Epcot is

operated by agreement with Duke Energy.

The new solar farm located along State Road 429 will be 10 times larger and is expected to generate 120,000 megawatt hours of power per year.

Reedy Creek Improvement District contracted with Miami-based Origis Energy USA to build the 270-acre facility.

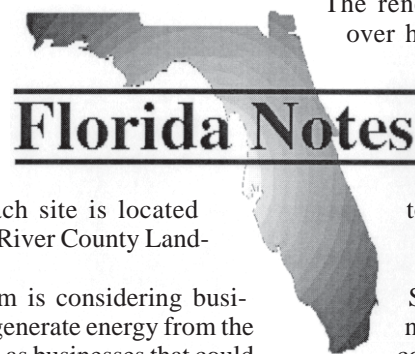
The renewable power generated by over half million solar panels will connect to Reedy Creek's power distribution system and eventually to Disney World.

Construction is scheduled to begin this spring.

Company news. Dave Smith and Jay Daniel announced the launch of a new company—Carbonworks USA LLC. The firm specializes in the treatment of contaminated groundwater and soil vapors, and provides equipment and filter media treatment systems designed to meet the specific conditions and requirements of each project.

They can be reached at (904) 352-0536 or on the web at www.carbonworks-usa.com.

NOTES
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SFWMD budgets \$1.9 million over next five years for capital improvements

Staff report

Earlier this year, the South Florida Water Management District Governing Board approved a \$1.9 billion budget for capital improvements.

The approval updated the district's five-year capital improvement plan affecting projects and infrastructure. For the coming year, the board budgeted \$321 million of the five-year total.

Most of the remaining \$1.6 billion from the plan is slated for restoration projects including the massive C-43 West Basin Storage Reservoir Project.

When completed in 2022, this reservoir will improve water quality in the Caloosahatchee estuary.

The five-year plan also budget \$64 million a year to build the Everglades Agricultural Area reservoir approved last year by the state Legislature.

It will reduce Lake Okeechobee discharges through the St. Lucie and Caloosa-

hatchee rivers to tidewater estuaries. The project will also remove nutrients from water slated for delivery to the Everglades National Park.

In addition, the board budgeted an additional \$300 million for operation and maintenance work to maintain pump stations and water storage structures that provide flood protection.

Sarasota potable water. The Sarasota City Commission voted to

negotiate a contract with the University of Central Florida for a two-year study of the city's drinking water system.

The purpose of the study is to find ways to reduce the costs of water treatment and to improve its quality.

The study addresses five aspects of Sarasota's water system. Three of them are related to water quality including one component to study microbial metabolism in the raw water supply.

Another component of interest is the feasibility of removing sulfate from the drinking water.

The study will also evaluate the current use of Sarasota Bay for source water. Reducing the use of bay water, which is purified by ion exchange treatment, might save money and improve the reliability of the treatment process.

In addition, the study will identify treatment processes to remove contaminants of emerging concern that might be the focus of future regulations.

Sarasota's water currently meets all federal and state safety standards.

The city council's discussions before approving the study emphasized that none of the water quality issues addressed by the study pose a risk to residents.

After discussion, the council approved negotiations by city staff with UCF officials to conduct the \$197,000 study.

City staff backed the recommendation to sole-source the UCF study, noting that it would save money based on a long history of working with the university.

Steven Duranceau, PhD, professor and director of the Environmental Systems Engineering Institute at UCF, will lead the study.

DEP plant awards. The Florida Department of Environmental Protection awarded its 2017 Plant Operations Excellence Awards to eight drinking water facilities and six domestic wastewater treatment facility statewide.

Drinking water plant awardees included the Island Water Association, the Peace River Manasota Regional Water Treatment Plant, Naval Air Station Whiting Field, Destin Water Users Inc., the Bay County Water Treatment Plant, the city of Dunedin, Hillsborough County's Lithia Treatment Plant, and the city of Clermont's East Water System.

Wastewater treatment plants receiving awards included the Village of Wellington Water Reclamation Facility, the city of Tarpon Springs Advanced Wastewater Treatment Facility, the Gainesville Regional Utility Kanapaha Water Reclamation Facility, the Military Point Regional Advanced Wastewater Treatment Facility and the Rivercamps on Crooked Creek Wastewater Treatment Plant.

DEP announced the awards at a Florida Rural Water Association seminar in Punta Gorda.

This is the 28th year that DEP and FRWA teamed to select award winners.

The awards broadly recognize the utilities and their management for "commitment to operational excellence."

Gretna drinking water upgrades. The city of Gretna is in the process of improving its drinking water system.



WATCH
Continued on Page 16

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DRILL

From Page 1

Phase 2 assessments growth as a key segment that accelerated near the end of 2017.

Kaub suggested that the new federal tax law is a key factor spurring property transactions and the resulting assessment project workload for drillers.

In addition, the change in leadership at the top of the Federal Reserve that occurred before the tax law was passed is arguably a factor that accelerated real estate transactions.

Pricing still an issue

But while the level of drilling work has increased across the board, drillers consistently said that pricing levels remains far too low, some going so far as to credibly argue the low prices are unsustainable.

This problem is most serious for drill-

ers whose revenues are dominated by remediation-associated drilling, especially by DEP's PRP-funded projects.

Pricing under the PRP is essentially a cost-per-foot model. It does not necessarily factor in the added costs of deep drilling, complicating factors of the site or the complexity of the project itself.

Fierce competition in the drilling industry is keeping prices low for Florida's remediation programs. And the prices that PRP pays drillers set the scale low for the remediation drilling industry.

Perhaps in the next year or two, the pricing model will be influenced by rising prices for PVC, steel, machinery and other components of well drilling equipment.

After years of relative stability, labor costs are increasing and will have to increase more to reflect the increasing costs

of housing, transportation and other living expenses in Florida.

After covering the costs of labor and materials, drillers said they are not turning enough profit to sustain capital investment in their businesses needed to refurbish rigs or buy new ones.

Several officials discussed in detail how their old equipment was being refurbished for continued use. Larger companies are bringing in rigs from their company's other service areas to meet the demand in Florida rather than buying new rigs for projects here.

David Hicks, operations manager at Singley Environmental & Remediation in Pensacola, said he recently moved a drilling rig from his firm's Mississippi office and is refurbishing it for Florida drilling projects.

Offsetting the high capital costs of new rigs are the potential operational advantages to drillers with the latest technology and the workload to keep them in continuous use.

If drillers have to increase wages, almost a given, then newer, more efficient rigs could increase worker efficiency to justify the higher pay and to some extent make more effective use of a dwindling labor pool.

Labor still a challenge

Again this year, drillers said that finding willing and capable labor remains a big challenge.

The ideal candidate has more than average physical strength and stamina, sig-

DRILL

Continued on Page 12

Environmental & Geotechnical Drillers serving Florida 2018 Directory

Company name / Contact information	EMR rate	Years in biz	Total staff / Staff in FL	Services / Capabilities	Equipment / Tools										1) Other services 2) Firm's specialty 3) Specialty business designations 4) Other equipment/tools 5) Areas served in Florida <small>Note: NA = No Answer</small>	
					Hollow stem auger	Air/mud rotary	Dual rotary	Sonic	Direct push	Diamond coring	Cone penetration testing					
Ambient Technologies 4610 Central Ave. St. Petersburg, FL 33711 (727) 328-0268 Fax: (727) 328-2477 Carlos Lemos, President info@ambienttech.com www.ambienttech.com	0.7	25	32/23	Environmental and geotechnical drilling; monitoring wells; soil & groundwater sampling; in-situ testing; inclined probing; rock coring, concrete coring; dewatering well points; methane recovery wells; injection wells for environmental remediation; split-spoon, Shelby tube soil sampling; mud rotary, auger borings (solid and hollow) & DPT; installation of piezometers and inclinometers; SPT with automatic hammer	■	■			■	■						<ol style="list-style-type: none"> Geophysical surveys for environmental, geotechnical and sinkhole investigations Environmental, Geotechnical and Geophysical Field Services for Project Site Assessment and Investigations MBE, DBE, SBE, SBD GPR, EUL, Magnetometer, Vacuum Excavator, ERI Electric Resistivity Imaging, GPS, Pipe & Cable Locators, Swift 56 and 112 Channel Resistivity Systems Serves entire state, Central America and Caribbean
American Vibracore Services Inc. 1215 Wallace Dr. Delray Beach, FL 33444 (561) 372-0500 Fax: (561) 372-0501 Fred Kaub, Chief Executive Officer info@americanvibracore.com www.americanvibracore.com	0.90	18	5/5	Vibracoring, geotechnical and environmental drilling, materials testing	■	■			■	■				■		<ol style="list-style-type: none"> Marine support services Vibracore sampling: offshore, rivers, canals, swamps, lakes SBE - State & Federal Environmental and geotechnical sonic drilling services Serves entire state
Cascade Drilling Technical Services Mary Place, Business Development mplace@cascade-env.com (206) 472-0441 Tampa - Mike Early mearly@cascade-env.com Ocala - Mike Rice mrice@cascade-env.com www.cascade-env.com	0.69	27	1100/50	Cascade is the leading provider of environmental and infrastructure drilling, in-situ remediation applications, and high resolution site characterization technologies. Our collaborative approach, high quality service, reliable crews and leading safety program make us the first choice in environmental services. We are the only integrated nationwide contractor with expert technical capabilities and fleet licensed to work in all 50 states. With more than 1,000 employees and over 48 locations, Cascade integrates technology, safety, sustainability and human potential to tackle the challenging environmental and geotechnical issues facing our clients.	■	■			■	■	■	■				<ol style="list-style-type: none"> Waste handling/management Sonic: smallest to full size; DPT: remedial injection, direct imaging, sampling; auger & rotary Drilling and Remediation Air/water knife, vacuum extraction Serves entire state
Custom Drilling Services Inc. 100 Kid Ellis Rd. Mulberry, FL 33860 (863) 425-9600 Fax: (863) 425-9620 Michael Johnson, Vice President mdjohnson@customdrilling.net www.customdrilling.net	.78	28	38/38	Environmental drilling: DPT services	■	■				■	■					<ol style="list-style-type: none"> Well abandonment, RC sand sampling, LDA Rotary and DPT Small business Coiled tubing unit for cementing Serves entire state
Directed Technologies Drilling Inc. 100 Rolling Ridge Dr. Bellafonte, PA 16823 1-800-239-5950 David Bardsley, Vice President info@horizontaldrill.com www.horizontaldrill.com	0.80	20+	30/0	Horizontal directional drilling (HDD) for environmental and water supply applications. Use of HDD methods to obtain soil samples under obstructions. Horizontal wells for monitoring, SVE, groundwater extraction, injection and dewatering.												<ol style="list-style-type: none"> NA Horizontal environmental drilling and well construction NA NA Serves entire state
Directional Technologies Inc. 130 Geronimo St., Unite 2 Miramar Beach, FL 32550 1-877-788-4479 Kyle Carlton, PG, Senior Geologist kcarlton@directionaltech.com www.directionaltech.com	NA	25	25/6	DTI is a horizontal directional drilling technology company specializing in the installation of horizontal wells for the environmental industry.					■							<ol style="list-style-type: none"> Horizontal well layout design, horizontal well screen engineering Installation of horizontal remediation wells for numerous remedial applications including air/oxygen/ozone sparge, SVE, MPE, ISCO injection, etc. NA NA Serves entire state
Earth Tech Drilling 2703 NW 19th St. Pompano Beach, FL 33069 (954) 974-2424 Fax: (954) 974-2423 Bob Orlando, President borlando@earthtechdrilling.com www.earthtechdrilling.com	0.91	16	9/9	Environmental and geotechnical drilling	■	■			■	■	■					<ol style="list-style-type: none"> NA Quality, safe environmental drilling SBE NA Serves entire state
Environmental Drilling Service Inc. 4712 Old Winter Garden Rd. Orlando, FL 32811 (407) 295-3532 Fax: (407) 296-3957 Doug Leonhardt, President doug@edsenvironmental.com www.edsenvironmental.com	NA	29	12/12	Sonic, DPT, hollow stem auger, mud/air rotary drilling, sampling and well installation	■	■			■	■	■					<ol style="list-style-type: none"> We assist consultants and contractors with in-situ remediation using chemical injection, air/biosparge, vapor extraction point installation, pumping and mixing NA NA NA Serves entire state

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Company name / Contact information	EMR rate	Years in biz	Total staff / Staff in FL	Services / Capabilities	Equipment / Tools							1) Other services 2) Firm's specialty 3) Specialty business designations 4) Other equipment/tools 5) Areas served in Florida Note: NA = No Answer		
					Hollow stem auger	Air/mud rotary	Dual rotary	Sonic	Direct push	Diamond coring	Cone penetration testing			
Enviroprobe Service Inc. 1717 SW 1st Way, Suite 15 Deerfield Beach, FL 33441 1-800-596-7472 Fax: (856) 291-6509 Tim Gallagher, President info.enviroprobe@gmail.com www.enviroprobe.com	0.927	23	17/2	Geoprobe, monitoring well installation, remote access drilling, SPT, ground penetrating radar (GPR), borehole geophysics, packer testing, private utility locating (UMO)	■	■	■	■						1) GPR, Geophysical services, private utility markout 2) We provide both Geoprobe and GPR services so that you only need to schedule one subcontractor 3) SBE 4) NA 5) Serves entire state
Geologistics Inc. 750 E. Sample Rd., Bldg. 2, Suite 207 Pompano Beach, FL 33064 1-800-807-0165 Mary Kaub, President info@dbegeo.com www.dbegeo.com	0.70	9	5/5	Geotechnical and environmental drilling, CPT testing, seismic monitoring and ground penetrating radar (GPR)	■	■		■	■		■			1) Ground penetrating radar 2) Environmental & geotechnical drilling including sonic drilling and CPT testing 3) FDOT-DBE-Broward Co. SBE OSD - WBE Federal SBE 4) Environmental & geotechnical sonic drilling services 5) Serves entire state
GFA International Inc. 1215 Wallace Dr. Delray Beach, FL 33444 (561) 347-0070 Fax: (561) 395-5805 Fred Kaub, President fkaub@teamgfa.com www.teamgfa.com	0.90	30	190/190	Geotechnical and environmental drilling, materials testing, inspections, code compliance, environmental assessments and remediation, asbestos and indoor air consulting	■	■		■	■	■	■			1) Heavy civil, transportation and infrastructure QC 2) Sonic drilling, wireline coring, borehole imaging, CPT testing, Geoprobe services, auto hammer precision, env. drilling 3) SBE - Federal; FL licenced well contractor 4) Sonic drilling, wireline coring, Geoprobe-Direct push 5) Serves entire state
Groundwater Protection 2300 Silver Star Rd. Orlando, FL 32804 (407) 426-7885 Fax: (407) 206-0856 Brian Shutts, Owner brian@drillprollc.com www.groundwaterprotection.com	0.69	32	32/32	Monitoring and remediation well installation; injection and well abandonment services; horizontal well installation. Auger, DPT, Sonic, angle drilling	■	■		■	■					1) Remediation systems, injection 2) Sonic, difficult access/low clearance angled wells 3) Certified small business, FL Water Well Contractor, NC/SC Water Well Contractor, Bonded in GA 4) Well abandonment 5) Serves entire state and Southeast U.S.
Huss Drilling Inc. 35920 State Road 52 Dade City, FL 33525 (352) 567-9500 Fax: (352) 567-6646 Ben Huss, Owner rbhuss@hussdrilling.com www.hussdrilling.com	0.74	28	24/24	Environmental, geotechnical, exploration deep wire line coring and water resource drilling services	■	■		■	■	■				1) Well rehabilitation 2) Environmental, geotechnical and exploration drilling 3) NA 4) ATV rigs, truck mtd. and track mtd. 5) Serves Central, NE and NW Florida
JAEE Environmental Services Inc. 3010 Peachtree Cir. Davie, FL 33328 (954) 476-8333 Fax: (954) 476-8347 Willie Smitherman, President jaee@bellsouth.net www.jaeeenv.com	0.96	27	14/14	Soil and groundwater sampling, installation of monitoring wells, well abandonment, bioremediation injection	■				■					1) Bio-injecting, well abandonment 2) Sampling using Geoprobe equipment 3) Water well contractor 4) NA 5) Serves entire state
National Env. Technology Inc. 12435 Jess Walden Rd. Dover, FL 33527 (813) 655-3612 Fax: (813) 655-3652 Ross Chinander, President netross@tampabay.rr.com www.netdrilling.com	0.88	25	6/6	Environmental and geotechnical drilling, and direct push services	■	■			■					1) NA 2) Geotechnical and environmental drilling and dewateringservices 3) NA 4) Limited access equipment 5) Serves entire state
Preferred Drilling Solutions Inc. 8820 66th St. N. Pinellas park, FL 33782 (727) 561-7477 Fax: (727) 561-9028 Chad Campbell, President chad@pdsflorida.com www.pdsflorida.com	0.87	16	43/43	Environmental drilling, direct push and remediation services. Statewide service with locations in Pinellas Park, Lakeland, Live Oak and Milton	■	■			■					1) Remediation services 2) Environmental services provider with focus on safety, quality and service 3) NA 4) NA 5) Serves entire state
R&M Drilling 12125 Emmaus Cemetery Rd. San Antonio, FL 33576 (813) 480-1674 Fax: (352) 588-0377 Ryan Etheridge, Owner/President info@rmdrilling.com www.rmdrilling.com	1.02	9	10/10	Environmental and geotechnical drilling contractor with direct push technology and tracked rigs for difficult access, indoor and low overhead clearance. Truck-mounted and tri-pod rigs with offsite hydraulic power. All terrain buggy for wetlands, wood, and palmetto field drilling. Monitor well, water well, dewatering, SVE wells, air sparge wells, injections, coring, continuous sampling, standard penetration tests, Shelby tubes, well abandonments. Two Florida locations.	■	■			■	■				1) Conventional water well drilling, aquifer testing, commercial and residential water well technicians 2) Geotechnical and environmental drilling, Geoprobe direct push drilling 3) FL Water Well Contractor Lic#9467 4) NA 5) Serves entire state
Singley Env. & Remediation 6741 Pine Forest Rd. Pensacola, FL 32526 (850) 944-7799 Fax: (850) 944-0704 David Hicks, Operations Manager pensacola@singleycc.com www.singleycc.com	NA	46	NA/NA	Environmental drilling for site assessments and remediation	■	■			■					1) Excavation, remediation system installation, chemical injection 2) Direct push technology, well installations and remediation services 3) NA 4) NA 5) Serves NE and NW Florida
Terracon Consultants Inc. 1675 Lee Rd. Winter Park, FL 32789 (407) 740-6110 Fax: (407) 740-6112 Erik Bluemke, Drilling Department Manager erik.bluemke@terracon.com www.terracon.com	.06	53	4,000/293	Terracon is a 100 percent employee owned consulting engineering firm providing multidiscipline services in environmental, geotechnical, construction materials testing and facilities architecture	■	■			■	■	■			1) Solid-stem augers, hollow-stem augers, odex, rock coring (NQ, HQ and PQ), rotary (air, mud, wash), casing advance (N&H) and down-hole hammer 2) Conventional field drilling and sampling methods as well as in-situ testing methods combined with geophysical investigations 3) NA 4) NA 5) Serves entire state from 11 offices
Universal Engineering Sciences Inc. 3532 Maggie Blvd. Orlando, FL 32811 (407) 423-0504 Fax: (407) 423-3106 Rich Carman, Corp. Director of Env. Services (407) 423-0504 rcarman@universalengineering.com www.universalengineering.com	1.15	54	757/726	Drilling, engineering design & consulting, code compliance plan review & inspection, materials testing/quality assurance, site assessment & remediation	■				■		■			1) Haz materials assessment & remediation, sinkhole assessment & remediation 2) Geotechnical engineering & testing, soil borings, monitor wells 3) NA 4) Drilling crews are 40-hour HAZWOPER trained 5) Serves entire state from 15 offices

Lee County conducting assessment to evaluate preserve arsenic levels

By **BLANCHE HARDY, PG**

Lee County officials discovered high levels of arsenic at the Pine Island Flatwoods Preserve in St. James City.

Concentrations of arsenic detected in groundwater samples collected from the preserve reached levels of up to 30 times the federal limit.

The county's Conservation 20/20 program owns and manages preserved lands including the Pine Island preserve.

The program's committee tasked Kimley-Horn and Associates Inc. with the preliminary investigation of the arsenic contamination.

The consultants completed limited soil sampling and issued a report of their findings in January. The committee shared that report with the Florida Department of Environmental Protection, who has subsequently become involved with resolving the issue.

"Lee County has been conducting independent monitoring to further evaluate conditions at the Pine Island Flatwoods Preserve to aid in the determination if arsenic levels were consistent with prior data, and if further assessment may be needed," said Dee Ann Miller, DEP's deputy press secretary.

"Based on the data submitted as part of this effort, the department determined there was a need for further assessment," she said.

Miller said that the department notified county officials that since groundwater monitoring at the site indicated the presence of arsenic exceeding the applicable groundwater cleanup target level, they need to conduct a formal site assessment.

The department met with the county for a pre-assessment planning meeting in March, she said.

The committee's consultant suggested

Jax incinerator cleanup work begins

By **PRAKASH GANDHI**

Progress is finally being made to clean up the impacts of Jacksonville solid waste incinerators that have been the center of environmental concerns for decades.

The city of Jacksonville signed a \$2.5 million contract last year with Aerostar SES LLC in Jacksonville to clean up the Southside incinerator site.

The project includes the "dig and haul" of 32,000 tons of contaminated soil and replacement with 29,000 cubic yards of fill dirt.

From the 1890s until the early 1970s, the city operated a number of municipal solid waste incinerators.

Disposal of ash material generated by burning solid waste at city-operated incinerators occurred on city and private property in Jacksonville's Northside and Southside neighborhoods.

The Southside incinerator was demolished around 1970. But two decades later, officials raised concerns about the environmental impacts of ash left from burning up to 120 tons of waste a day.

The Southside incinerator site is located in the southeastern portion of Jacksonville and consists of a parcel of property where the former incinerator was located and three parcels to the west where the waste ash was deposited.

The main portion of the site where the former incinerator was built is about five acres. Jacksonville officials said incinerator ash is present on at least three other nearby parcels that total about 3.2 acres.

The ash contains lead, arsenic, industrial chemicals, dioxins and other pollutants.

The Southside site has been scheduled for cleanup for years as mandated by the Florida Department of Environmental Protection in a consent order.

the arsenic in groundwater may be the result of three possible conditions: it may be naturally occurring; there may be an undiscovered source; or it may be the result of the long-term disposal of treated wastewater effluent by ground application from the Pine Island Wastewater Treatment Plant.

The Conservation 20/20 program estimates it will spend approximately \$68,000 on existing and proposed groundwater wells, and water and soil sampling and analysis.

Some members of the committee feel the funds, earmarked for conservation, should be reimbursed by Lee County Utilities, which operates the wastewater plant.

Arsenic has been detected in the plant's effluent in the past and pH levels of plant effluent have also been mentioned as a potential contributing factor.

Spikes in arsenic contamination have shown up in analyses of groundwater collected from plant monitoring wells from as early as 2011.

A study commissioned by the county noted a cattle dipping vat was reported to have been operational at an unknown location on the island in the 1930s. The vat was suspected to be the source of the ar-

senic in the utility's well water.

The original wells were subsequently closed and new wells were installed in 2015. Arsenic has not been included in the sampling protocol for the newly installed wells for some time.

"The department will continue to co-

ordinate with the county and remains available to provide technical assistance as needed as the assessment continues," said Miller. "This assessment work will help identify potential sources and inform the development of any necessary remediation plan."

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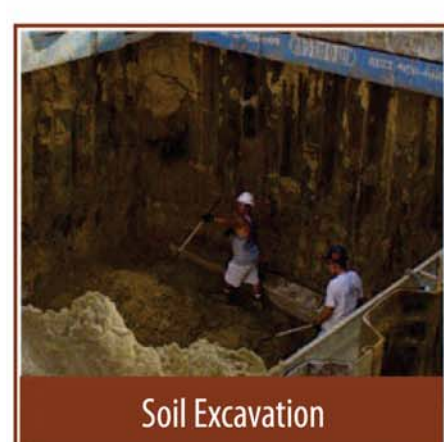
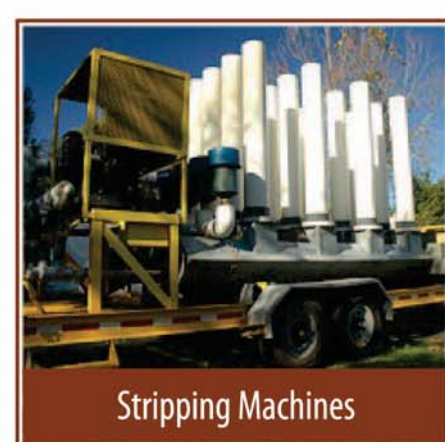
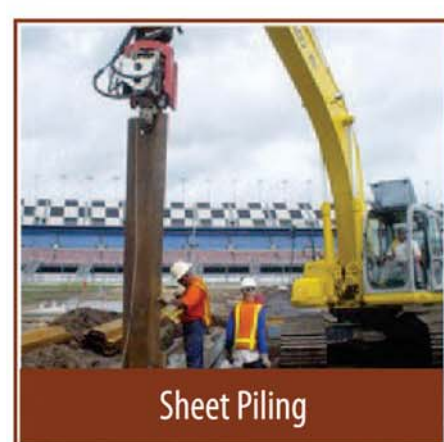
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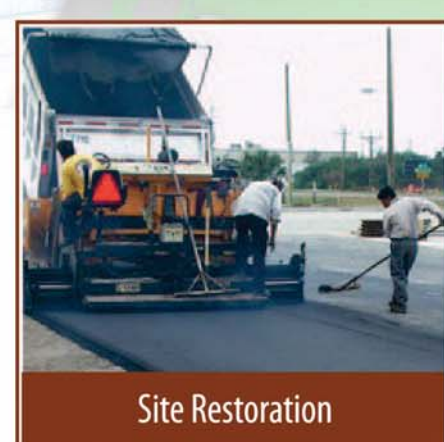
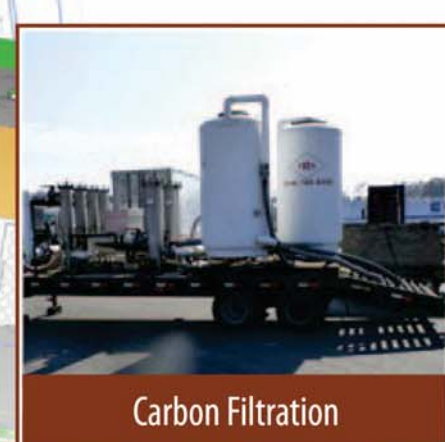
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ASH
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State moves to take over CWA wetland permitting from Army Corps, EPA

By ROY LAUGHLIN

The Florida Department of Environmental Protection is poised to take over U.S. Army Corps of Engineers and U.S. Environmental Protection Agency responsibility for issuing Section 404 wetland permits under the federal Clean Water Act.

House Bill 7043 and its companion bill in the Senate were passed by the Florida Legislature in the final week of the 2018 legislative session. Gov. Rick Scott signed the bill into law in late March.

Florida now joins the states of Michi-

gan and New Jersey in assuming Section 404 wetland permitting under the Clean Water Act. This portion of the Clean Water Act deals with dredging and the discharge of dredged materials to fill wetlands.

Unlike the other two states, Florida did not seek funding from the federal government to take responsibility for the permitting.

In 2006, Florida considered assuming federal wetlands permitting responsibility during a prior construction bubble.

But at that time, officials rejected the proposal saying that the workload would

be too heavy and the state would need federal funding to process the permits.

Staff availability is a critical issue. Under Gov. Rick Scott and the state Legislature, Florida Department of Environmental Protection staffing has dropped from 3,500 to 2,900 personnel, a loss of 600 employees, following significant DEP funding cuts.

It's possible, perhaps probable, that should Florida assume Section 404 wetland permitting, state officials could go back to the federal government seeking subsidies.

According to a House of Representatives staff analysis, the bill authorizes DEP to assume administration of the federal program, ostensibly to "streamline" it.

It does not merge current state and federal permitting processes. It grants DEP rulemaking authority to implement the transfer of the Section 404 permitting program.

The bill stipulates that the federal requirements would apply to state administered Section 404 permits, the formal designation of "wetland permits."

It authorizes DEP to delegate the administration of state programs.

It may review, modify, revoke or rescind any state-administered Section 404 permit issued by a delegated entity so that it ensures consistency with federal law.

The language allows DEP to delegate permitting to water management districts and local governments, which currently handle some permitting.

Supporters of the bill claim that reducing the wait time for permits, which they refer to as "efficiency" or "streamlining," is the primary benefit to Florida's developers and builders.

The proposed law specifically exempts state-administered Section 404 permits from state permitting decision deadlines, and to an effective period of no more than five years.

Currently, the U.S. Army Corps of Engineers, which administers wetland permits for the EPA under the Clean Water Act, has at least 30 days for permit decisions, with additional time for comment and at least 90 days if the EPA reviews the decision.

The new law stipulates that for a timely complete application for permit re-issuance a state administered Section 404 permit does not expire until DEP acts on the application, in contrast to state permits that are granted if an excessive delay without a decision occurs.

Under existing law, the EPA and the corps jointly implement Section 404 wetlands permitting.

The corps reviews all applications and

makes decisions to issue, while the EPA retains the prerogative to review the decisions.

According to the legislative analysis, the corps will retain dredge and fill permitting authority for projects in "navigable waters."

Waterbodies that remain under corps Section 404 implementing responsibility will be negotiated between DEP and the corps.

The EPA will retain review authority over federal 404 permits if DEP assumes implementing responsibility.

The schedule of the transfer is yet to be determined. The EPA must approve the transfer, including formal notification and comment period.

If and when Florida assumes implementation responsibility, pending permits will be transferred from the corps to DEP. Concomitantly, the corps will suspend administration and enforcement of general permits. Subsequently, DEP will issue separate federal and state Section 404 permits.

As this legislation developed, most of its support came from developers and real estate interests who have been attempting since 2006 to move all wetlands permitting to the much more permissive DEP.

Critics of the bill including former DEP administrators point out that if Florida rejected taking over administration in 2006 due to lack of resources, the department's current funding level and marginal staffing put it in a much worse position today to appropriately review wetland permits.

Environmental organizations are oddly split.

The Nature Conservancy supports the permitting transfer, while Audubon Florida has taken no position. The Sierra Club, Florida Wildlife Federation and EarthJustice oppose the transfer.

The hand-off will not be spontaneous.

Jennifer Miller, spokesperson for the Jacksonville District of the corps, declined to comment on the pending permit authority transfer to Florida.

But commenting on the Michigan and New Jersey experiences, she noted that it took Michigan approximately four years to complete the transition and New Jersey approximately seven years.

ASH

From Page 7
About \$500,000 was spent in 1999-2000 for a study to determine the extent and depth of the contamination.

Then two years ago, a consultant identified 18 lots where cleanup was necessary, mainly on commercial and industrial land, sometimes blocks from the incinerator.

The consultant's report suggested installing a synthetic barrier covered with a foot-thick layer of compacted soil.

Tia Ford, a spokesperson for the city of Jacksonville, said the remediation process closely follows the DEP plan.

It includes remediation of the parcel in which the incinerator was formerly located by removing the upper foot of impacted soils and capping it with two feet of clean soil, followed by sod.

Most of the wetland areas in this parcel are unaffected by the work and will be preserved and fenced to control access, Ford said.

The upper two feet of impacted soils on privately owned parcels near the north of the ash disposal area will be excavated and placed within city-owned parcels containing the former ash disposal area.

The privately-owned parcels will be backfilled with two feet of clean fill and sodded.

The ash disposal area will be regraded and capped with a geotextile material and one foot of clean soil and grass sod, Ford added.

The former ash disposal area will be fenced upon completion to control site access.

The Southside project is small in comparison to the complex, \$100 million effort needed to clean up the estimated 3,700 properties polluted by incinerator ash north of the St. Johns River.



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St. Lucie officials pursue new path to halt construction of biosolids facility

By PRAKASH GANDHI

St. Lucie County officials are taking a new approach in their effort against a proposed biosolids management facility they fear may have serious water quality impacts.

The proposed 6,580-acre plant is on Minute Maid Road near the Florida Turnpike. About 90 percent of the land is in St. Lucie County and the balance in Indian River County.

The applicant, Sunbreak Farms LLC, submitted a request in March, 2017, to the Florida Department of Environmental Protection for a permit to construct and operate the biosolids management facility with a permitted Class AA compost production of 500 dry tons per day.

DEP determined that a wastewater permit is required for the facility and that the applicant provided reasonable assurance that the project complies with all state regulations.

But county officials are concerned about the project's potential impacts on water quality in the C-25 Canal and, ultimately, the St. Lucie Estuary and Indian River Lagoon.

County staff asked their solid waste and utilities consultant, CDM Smith Inc., to review Sunbreak's proposal.

CDM Smith concluded that Sunbreak's permit application and DEP's notice of intent did not provide enough information for them to evaluate the facility's environmental impacts, especially its effects on water quality in the C-25 Canal and downstream waterbodies.

The county commission then authorized its staff to file a petition for a formal administrative hearing challenging DEP's decision to issue the permit to Sunbreak.

DEP and the South Florida Water Management District advised the county that Sunbreak would need to modify its existing environmental resource permit before starting up its composting operation.

The water quality impacts of Sunbreak's activities were not evaluated by DEP in the pending case because those issues would be addressed by the water management district.

Now, county officials have decided to change their approach, opting to drop their petition for a hearing.

"Based on the information provided by the DEP and South Florida Water Management District, it appears that this option is not likely to resolve the county's primary concerns regarding water quality," said county attorney Daniel McIntyre.

Instead, county officials believe a better option will be shift attention to the modification of the environmental resource permit that Sunbreak needs to obtain from the water management district.

County attorneys said the county can use the ERP review process to inform the district about the county's concerns regarding water quality. The county also believes it may be able to resolve the issues without litigation.

DEP Spokesperson Dee Ann Miller said a hearing had been set for early April in Port St. Lucie to discuss the matter.

"No settlement was able to be reached between the county and the applicant, so the department has moved forward in the administrative process," said Miller.

Biosolids will be blended at the facility with bulking agents that primarily consist of chipped yard trash debris and other green wastes.

The blended biosolids will be placed into windrows constructed to dimensions

of 16 feet wide and eight feet tall.

Biosolids generated by this facility will be either marketed or disposed of in a permitted solid waste landfill.

DEP is also requiring the applicant to closely monitor the site and maintain

records of the quantities of biosolids generated.

Editor's note: As we went to press, Sunbreak Farms LLC received DEP permit approval to construct and operate the facility.



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New report details health risks in communities near oil, gas facilities

By BLANCHE HARDY, PG

The National Association for the Advancement of Colored People and the Clean Air Task Force recently published a report entitled "Fumes Across the Fence-Line: The Health Impacts of Air Pollution from Oil & Gas Facilities on African American Communities."

The report provides details of health risks impacting African-American communities as the result of airborne pollutants caused by oil and natural gas development.

The study concentrated on communities where oil and natural gas refineries are placed near the property lines of African American and low-income people. The agencies present data in the report identifying persistent environmental racism.

"Energy companies often deny responsibility for the disproportionate impact of polluting facilities on lower-income communities and communities of color," said Kathy Eglund, chair of the NAACP National Board's Environmental and Climate Justice Committee.

"It is claimed that in most cases the potentially toxic facilities were built first and communities knowingly developed around them," she said. "However, studies of such areas show that industrial polluting facilities and sites have frequently been built in transitional neighborhoods, where the demographics have shifted from wealthier white residents to lower-income people of color."

Among the key findings of the study are that oil and gas facilities are built near or exist within a half mile of one million African Americans; the facilities violate U.S. Environmental Protection Agency air quality standards in many of these communities; and 91 counties in the U.S. are building or have oil refineries close to 6.7 million African Americans, exposing them to toxic and hazardous emissions.

"Studies of air pollution from the oil and gas industry have revealed emissions throughout the entire supply chain, from the wellhead to the consumer, with deleterious effects on communities around the

country," said Lesley Fleischman, a research analyst for Clean Air Task Force and co-author of the study.

The report incorporates data and analysis included in two recent reports published by the Clean Air Task Force.

CATF's "2016 Fossil Fumes" report detailed the link between air toxins and the increased risk of cancer and respiratory disorders in counties that exceed EPA's level of concern and "Gasping for Breath" provided estimates of the health impacts from ozone smog caused by emissions from the oil and gas industry.

The Earthworks and FracTracker Alliance Oil and Gas Threat Map was used in developing the recent report to illustrate the threat to populations from pollution from the oil and gas industry.

The map shows the locations of the 1.2 million oil and gas facilities operating around the country, as well as the populations, schools and hospitals within a half-mile radius of those facilities.

"The effects of oil and gas pollution are disproportionately afflicting African Americans, particularly cancer and respiratory issues, and the trend is only increasing," said Dr. Doris Browne, president of the National Medical Association.

"Our membership is seeing far too many patients in communities of color suffering from these diseases," she said. "It is our goal to fight to reverse this dangerous trend."

In 2016, EPA issued standards for methane and ozone for new or modified oil and gas facilities. The agency also began regulating existing sources of methane and other air pollutants.

The NAACP noted that the Trump administration has targeted the 2016 standards for rollback, resulting in court challenges.

"What this administration is discovering as it attempts to undo vital health and environmental protections is that these sensible standards cannot simply be wished away," said Sarah Uhl, program director, Short-Lived Climate Pollutants, at the Clean Air Task Force.



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DEP withdraws controversial 2016 surface water quality standards

By ROY LAUGHLIN

In February, the Florida Department of Environmental Protection formally announced the withdrawal of its 2016 Surface Water Quality Standards, the most recent amendments to Chapter 62-302.530, Florida Administrative Code.

The withdrawal followed a series of petitions considered by the Florida Department of Administrative Hearings in which DEP's rule defense ultimately prevailed.

However, subsequent lawsuits in the 1st and 3rd District Court of Appeals overturned the procedural dismissals and re-

manded the case back to DOAH.

The ongoing lawsuits prevented the rule's final adoption, a prerequisite for submission to the U.S. Environmental Protection Agency for oversight review under the Clean Water Act.

Under the circumstances, DEP noted that "the proper legal status of the rule-making is that the rule amendments remain proposed agency action rather than being final and effective (as has been reflected in the Florida Administrative Code)."

The formal withdrawal, DEP said, corrects the inaccuracies in the Florida Administrative Code.

The proposed rules were controversial even before their final approval by the state Environmental Regulation Commission in 2016. Environmental activists were outraged that some substances including benzene had been assigned more lenient water quality standards derived from risk-based determinations.

The updated standards were largely based on exposure levels from drinking water and seafood consumption.

The Seminole Tribe of Florida, a party to one of the suits, criticized the new standards noting that tribal members were likely to eat far more seafood and therefore be at far greater risk than the probabilistic risk calculations indicated.

In 2016, some activists expressed concern that relaxing the standards for petroleum hydrocarbons such as benzene was opening the door for fracking and oil drilling in the state.

The ERC standards approval vote was also controversial because the commission had two unfilled seats when the new standards were approved. The 3-2 vote that carried the approval might have gone the other way had the seats been filled.

On the day of the withdrawal, the department announced a new rulemaking effort. In that announcement, DEP specifically said that the department "intends to conduct a state-wide fish consumption survey to accurately determine the amount

and types of fish commonly eaten by Floridians in advance of criteria development and adoption."

The challenge of the rule by the Seminole Tribe seems to be front and center in the upcoming rulemaking process.

When DEP passed the 2016 rule, it noted that the number of substances regulated by the rule increased to 82. Thirty-nine of the substances on the 2016 list were not previously regulated in Florida's surface waters.

Both the additions and the 43 previously-listed substances were subject to comparable probabilistic risk assessment. In the latter case, some standards changed, with some increasing and others decreasing.

The statement that a replacement rule will focus on fish consumption might imply that a subset of substances such as mercury or chlorinated organic compounds that biomagnify in food chains will be the focus of rule revision.

Under the rule revision proposal, any of the substances in the old regulation are subject to review, if warranted, noted Dee Ann Miller, DEP's deputy press secretary.

Even though the department is not starting from scratch to calculate new human health risk-based criteria, the proposed preliminary draft of a replacement rule is not likely to be completed for months or longer.

GAIA report criticizes WTE benefits

By ROY LAUGHLIN

Late last year, the Global Alliance for Incinerator Alternatives issued a report criticizing waste incineration and the re-emerging emphasis on waste-to-energy incineration as a viable recycling option.

The report criticized waste incineration calling it "a false path to zero waste (that undermines true sustainability goals.)"

The report said that waste incinerators increase toxic emissions that affect surrounding communities.

In addition, while 2013 U.S. Environmental Protection Agency standards require that waste materials used as fuel be cleaner than coal, the report alleged that the opposite is actually true.

The report noted that only 77 municipal waste incinerators are currently operate, down from the industry's zenith of 114 facilities in the 1980s and early 1990s.

Further, the U.S. Conference of Mayors specifically excluded "waste-to-energy" incineration from their new commitment to 100 percent renewable energy.

The EPA's 2013 Non-Hazardous Secondary Materials rule relaxed restrictions on co-incineration of combustible waste in coal-burning or natural gas-burning facilities.

It could allow up to 14,000 large combustion facilities, "major source boilers" under the rule, and as many as 180,000 smaller combustion facilities, "area source boilers," to co-incinerate industrial and processed municipal waste.

The report cited several problems with the rule. First, the waste-burning plants need burn as little as 15 percent coal to be subject to the more lenient NHSM rule.

If the fuel is mostly coal, emission composition will be dominated by coal's composition, not by contaminants in the waste component.

The rule requires no notification for local communities. A case study in the report showed that local communities face the primary threat of emissions from nearby waste combustion facilities.

Finally, combustion facilities subject to the rule have no monitoring requirements and hardly any environmental agency oversight, according to the report.

Even with relaxed emission standards, the electricity cogeneration industry has experienced a couple of recent highly visible failures.


RePower South's proposal to build waste-to-energy cogeneration plants in Virginia were rejected after initial approval. In addition, a plan to build a plant in the Charleston, SC, area was scaled back significantly.

One impetus for the GAIA report may be China's recent announcement that it will no longer import recyclable wastes from the U.S. and the European Union. China said the wastes were so contaminated that the recycling effort had become uneconomical.

The report itself contained no discussion of China's recent decision, which may not have been finalized while the report was in preparation before September, 2017.

As an alternative to cogeneration-combustion, the GAIA report encouraged reuse and recycling. Substitution of recyclable materials in products and processes for those currently used nonrecyclables will be a key strategy to meet a 75 percent recycling goal.

As a side benefit, the report noted that "increased recycling rates could create millions of new jobs while reducing greenhouse gas emissions and pollutants dangerous to public health."



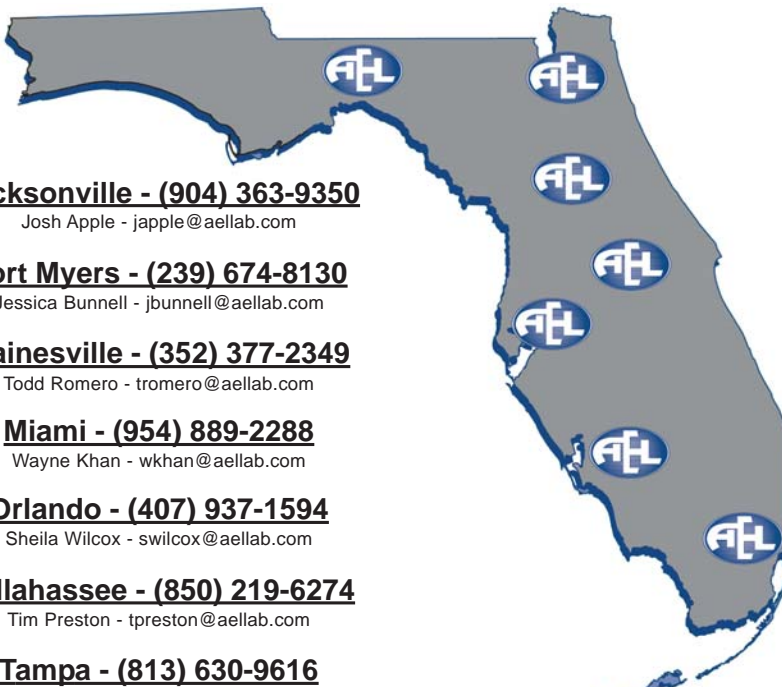
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Calendar

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APR. 9-11 – Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 10-12 – Course: Train the Trainer: How to Design & Deliver Effective Training, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

APR. 10-11 – Course: Georgia Association of Water Professionals, Spring Conference & Expo, Jekyll Island, GA. Contact Mara Cooke at (770) 618-8690 or visit www.gawp.org.

APR. 11-13 – Course: 24 hour OSHA HAZWOPER Training Course, Tallahassee, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 11-13 – Symposium: Hydrogeology Symposium and Field Trips, Clemson, SC. Presented by Clemson University. Call (864) 656-3276 or visit www.clemson.edu/cecas/departments/ees/symposium/index.html.

APR. 13-19 – Course: Backflow Prevention Assembly Tester Training and Certification, Fort Myers, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 15-18 – Conference: Florida Water Resources Conference, Daytona Beach, FL. Presented by the Florida Water Environment Association, the Florida Section of the American Water Works Association and the Florida Pollution Control Operators Association. Call (407) 363-7751 or visit fwrc.org.

APR. 16-17 – Course: Advanced Backflow Assembly Tester, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 16-20 – Course: Backflow Prevention Assembly Tester Training and Certification, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 16 – Course: Asbestos Refresher: Project Design, Gainesville, FL. Presented by the University of Florida TREEO Center. Visit www.treeo.ufl.edu.

APR. 17 – Course: Refresher Training Course for Experienced Solid Waste Spotter, 4 hours, Plant City, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

APR. 17 – Course: Refresher Training Course for Experienced Solid Waste Operators, 4 hours, Plant City, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 17-18 – Course: Refresher Training Course for Experienced Solid Waste Operators, 16 hours, Plant City, FL. Presented by the University of Florida TREEO Center. Visit www.treeo.ufl.edu.

APR. 17-19 – Course: Initial Training for Operators of Landfills and Waste Processing Facilities, Plant City, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

APR. 17 – Course: Refresher Training Course for Experienced Solid Waste Operators, 8 hours, Plant City, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 17 – Course: Initial Training Course for Spotters at Landfills, C&D Sites and Transfer Stations, 8 hours, Plant City, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 17-18 – Course: Initial Training Course for Transfer Station Operators and Materials Recovery

Facilities, 16 hours, Plant City, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 17-19 – Course: Initial Training Course for Landfill Operators and C&D Sites – 24 Hours, Plant City, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

APR. 17 – Course: Asbestos Refresher: Inspector, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

APR. 17 – Course: Refresher Training Course for Experienced Solid Waste Spotter, 4 hours, Plant City, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

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APR. 18 – Course: Asbestos Refresher: Contractor/Supervisor, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 18 – Course: Basic Water & Wastewater Pump Maintenance, Kissimmee, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 20 – Course: Unidirectional Flushing Workshop, Kissimmee, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

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

APR. 22-25 – Conference: GIS & Water Resources Conference, Orlando, FL. Presented by the America Water Resources Association. Call (540) 687-8390 or visit www.awra.org.

APR. 23-24 – Exam: Backflow Prevention Recertification Exam, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 24-27 – Course: Water Class C Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 25-27 – Course: Fundamentals of Slope Stability and Settlement for Solid Waste Disposal Facilities, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 26-27 – Exam: Backflow Prevention Recertification Exam, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 26 – Course: 8 hour OSHA HAZWOPER Annual Refresher, Tallahassee, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 27-28 – Course: Backflow Prevention Recertification, Fort Myers, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

APR. 28-29 – Course: Backflow Prevention Recertification, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

May

May 1 – Course: DEP SOP's for Water Sampling & Meter Testing, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 1-2 – Course: Pumping Systems Operations & Maintenance, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 1 – Course: DEP SOP's for Water Sampling & Meter Testing, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 2 – Course: Intro to DEP SOP's for Groundwater, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 3 – Course: Unidirectional Flushing Workshop, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 7-11 – Course: Backflow Prevention Assembly Tester Training and Certification, Orlando, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 7 – Course: Asbestos Refresher: Project Design, Davie, FL. Presented by the University of

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

May 8 – Course: Asbestos Refresher: Inspector, Davie, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 8 – Course: Asbestos Refresher: Management Planner, Davie, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 7-11 – Conference: National Mitigation & Ecosystem Banking Conference, Louisville, KY. Presented by JT&A Inc. Call 1-800-726-4852 or visit mitigationbankingconference.com.

May 10-12 – Conference: Florida Ground Water Association Annual Convention & Trade Show, Orlando, FL. Call (850) 205-5641 or visit www.fgwa.org.

May 14-16 – Course: Process Control of Advanced Waste Treatment Plants, Marathon, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 14-18 – Course: Backflow Prevention Assembly Tester Training and Certification, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 15-17 – Conference: Georgia Rural Water Association Spring Conference, Jekyll Island, GA, Call (770) 358-0221 or visit www.grwa.org.

May 15-17 – Course: Initial Training Course for Landfill Operators and C&D Sites, 24 Hours, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 15 – Course: Refresher Training Course for Experienced Solid Waste Spotter, 4 Hours, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

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Water/Wastewater Courses

DEP SOP's for Water Sampling & Meter Testing
May 1, 2018 | Gainesville, FL | CEUs: 0.8

Pumping Systems Operations & Maintenance
May 1-2, 2018 | Gainesville, FL | CEUs: 1.6

Intro to DEP SOP's for Groundwater
May 2, 2018 | Gainesville, FL | CEUs: 0.4

Unidirectional Flushing Workshop
May 3, 2018 | Gainesville, FL | CEUs: 0.8

Process Control of Advanced Waste Treatment Plants
May 14-16, 2018 | Marathon, FL | CEUs: 2.1

Introduction to Lift Station Maintenance
May 17, 2018 | Marathon, FL | CEUs: 0.8

Wastewater Collection System Cleaning & Maintenance
May 18, 2018 | Marathon, FL | CEUs: 0.8

Asbestos Courses

Asbestos Inspector
June 4-6, 2018 | Gainesville, FL

Asbestos Refreshers
May 7-9, 2018 | Davie, FL
Aug. 7-9, 2018 | Ft. Walton Beach, FL

Solid Waste Courses

Initial & Refresher Solid Waste Courses
May 15-17, 2018 | Gainesville, FL
Jul. 24-26, 2018 | Plant City, FL

Backflow Prevention Courses

Backflow Prevention Assembly Tester Training & Certification

May 4-12, 2018 | Venice, FL*

May 7-11, 2018 | Orlando, FL

May 14-18, 2018 | Gainesville, FL

Jun. 1-9, 2018 | Ft. Myers, FL*

Jun. 2-10, 2018 | Tampa, FL**

Jun. 4-8, 2018 | West Palm Beach, FL

Jun. 23-Jul. 1, 2018 | Jacksonville, FL**

* (Two consecutive Fri. & Sat.) | ** (Two consecutive Sat. & Sun.)

Backflow Prevention Assembly Repair & Maintenance Training & Certification

May 21-23, 2018 | Gainesville, FL

May 25-26, 2018 | Venice, FL

Jun. 6-8, 2018 | Orlando, FL

Backflow Prevention Recertification

May 5-6, 2018 | Bradenton, FL

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May 31-Jun. 1, 2018 | Pensacola, FL

Jun. 4-5, 2018 | Orlando, FL

Jun. 14-15, 2018 | Gainesville, FL

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TURKEY POINT

From Page 1

FPL agreed to share the cost of a new treatment plant, but the county's estimates to comply with the pending deadline came in at nearly a billion dollars.

The proposal could be a financial benefit to the county provided that FPL can get approval to extend the life of its aging Turkey Point reactors. They are due to retire in about 15 years.

Providing treated effluent to FPL isn't a new idea. In the county's 2013 compliance plan, FPL was slated to receive 90 mgd of reclaimed wastewater for two pro-

posed nuclear reactors that would use cooling tower technology rather than canals.

The county would achieve up to 75 percent compliance with the state's requirements under the 2013 plan.

The new FPL reactors are still planned but have been postponed due partially to construction cost overruns at nuclear plants in Georgia and South Carolina.

"In the long run, the county seeks to utilize as much as one-third of its entire wastewater stream to cool two (new) nuclear reactors," said Suarez. "These have just been given tentative approval by the Nuclear Regulatory Commission.

"If you combine the 60 million gallons now being proposed for existing plants with the 90 million that could be used in the cooling towers for the new reactors, the county would be in full compliance with the 2025 requirements."

FPL has 10 years to mitigate the salt-water plume in the canals that generated a

\$200 million cleanup. FPL's customers are footing most of that bill through a recently state-approved rate increase.

"The icing on the cake would be the elimination of the cooling canals eight years ahead of the expiration of the current permit," said Suarez. "This is what is called a win-win proposition."

DRILL

From Page 5

nificant resistance to heat fatigue, and a willingness to work long hours, often involving travel away from the home for multiple days each week.

"There's a lack of people that are interested in getting into this industry at this time," noted Chinander.

Pay rates vary across the state but are consistently above Florida's 2018 minimum pay rate of \$8.25 per hour. North of the I-4 corridor, the starting pay rate is \$12-\$14 per hour for helpers and higher depending on experience.

But it does not compare with construction job pay, which begins above \$16 per hour and often requires fewer skills to start, less travel and fewer hours.

In South Florida, wages are higher. One of the area's largest drillers said that prevailing wages on one project requiring certified payrolls were: Drillers at \$36.85 per hour + \$30.70 per hour fringe benefits, totaling \$67.55; Assistant Drillers at \$33.22 per hour + \$30.22 per hour fringe benefits, totaling \$63.44; and Laborers at \$30.08 per hour + \$20.47 per hour fringe benefits, totaling \$50.55.

"Everybody in my world is trainable as long as you have a professional crew to train them," said Eric Bluemke, drilling department manager for Terracon Consultants in Winter Park.

Drilling skills are typically learned on the job or through apprenticeship. The drillers we spoke to provide on-the-job training with the goal of acquiring and retaining skilled employees at all levels.

The most sophisticated apprenticeship efforts described include pairing a laborer with a trained technician for both supervision and training.

Bluemke said that a motivated trainee can become a skilled driller familiar with both machine operation and the critical judgment to assess well drilling techniques within a year. Some trainees take longer.

Employee retention often requires additional employer-provided training and competence-building opportunities for workers at all levels.

Since 2008, many older well drillers have retired from the business and a new generation is now entering the trade.

Well drilling labor at any level is much more than just another blue-collar job. Its practitioners have specialized skills in a trade whose technology has elevated to at least a mid-tech level, above average physical prowess and the ability to meet a demanding work ethic.

Drillers noted that it is taking time to adjust to the labor pool of younger workers.

Safety a top concern

Several drillers we interviewed characterized the business as a potentially risky occupation. This year, safety issues and regulations are a focus for drilling executives and their employees.

The primary safety issue is the avoidance of accidents while operating rigs. According to Chinander and Kaub, part of that risk is increasingly due to fatigue from working outside in high temperatures.

Drilling companies provide employees with safety training involving rig operation and dealing with environmental conditions. OSHA-training courses and apprenticeship training on the job are two primary training mechanisms.

Bluemke noted that his company now uses a proprietary risk reporting app operated from a smart phone or tablet. Any employee can report a risk or near-miss situation.

The risk reports propagate throughout the company so that other employees are advised of the risks. If warranted, management may step in to address the risks.

U.S. Department of Transportation regulations are another item on drilling companies' safety agenda. DOT's new

regulations affect drilling companies in two ways.

First, DOT has reduced the number of work-day hours that drivers with a Class A commercial driver's license may operate a vehicle. For those drivers whose rigs are on the road before dawn, driven several hours to the work site and then well into the evening before returning home, it is easy to exceed the 14-hour driver limit.

Second, the pool of applicants holding a Class A CDL is shrinking as DOT regulations now exclude those with back conditions, heart conditions and diabetes.

People with those conditions would not be hired by drillers because drivers are also workers at drilling sites.

Plus, the costs for CDL driver monitoring is going up. Increasingly, DOT is pushing companies to abandon handwritten logbooks for compliance verification, and begin using GPS data loggers to meet the requirements of these rules, especially if they drive rigs across state lines.

Electronic logging and verification is not cheap. Campbell said the cost of a GPS logging device is as much as \$50 per vehicle per month. Over a fleet with a couple of dozen rigs, that becomes a substantial additional operating cost.

The Occupational Safety and Health Administration recently developed silica dust exposure standards for workers. Drillers performing some techniques can be exposed to silica dust from concrete.

Kaub explained that most drilling companies recently completed or are in the process of completing initial exposure monitoring. If exposures are low or non-existent, then no protection or further monitoring is required.

But if exposure to silica dust is sufficiently high, then protection using a mask or respirator is required.

Meeting these job safety requirements will be easier with new rigs. Geoprobe and other manufacturers are looking at new rig designs to decrease weight so that either vehicle-mounted rigs or those on trailers will be below the weight limit requiring Class A CDL drivers.

Manufacturers are also adding automated drilling controls so that rigs will not operate above the tolerances of the equipment or the drilling accessories, such as rods or bits. That will reduce failures that cause injuries.

They are also modifying the rig function to reduce worker actions that cause fatigue that can contribute to accidents.

The drilling enterprise

Florida's drilling industry is larger than you might guess. There are more than 500 drilling companies in Florida engaged in well drilling and drilling technology, according to Danielle Jessup, executive director for the Florida Ground Water Association.

The vast majority are water resource drillers—those licensed by the state to install drinking water wells.

A subset of that large number includes drillers who focus on environmental, geo-technical, remediation and deep disposal well drilling.


Florida's drilling enterprise is widespread, technically sophisticated, and a source of income both for drillers and the vendors who supply equipment and expendable supplies.

With the industry so busy, it was paradoxical to hear so many drillers mention that prices are too low to recapitalize. And some expect a recession in the near future.

Kaub said that the current bubble has lasted two years longer than he expected. Campbell was wary that the drilling industry is at the high point of its current cycle.

With the inherent uncertainty that we may be at the top of a business cycle, drillers are staying calm and carrying on during this busy time, hoping that the current business climate lasts a while longer.

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Florida Potable Reuse Commission formed to address issues of potable reuse

By ROY LAUGHLIN

In early February, a news release announced the establishment of the Florida Potable Reuse Commission, with the snappy byline, "Potable reuse is a safe reliable water supply that meets federal and state drinking water standards."

The term "commission" typically indicates a group formed by official action. In fact, this commission is a professional trade group convened by WaterReuse Florida, the Florida Section of the American Water Works Association and the Florida Water Environment Association.

These industry groups' members will be among the first to benefit financially if Florida adopts regulations that endorse potable water reuse.

The public side of the commission's establishment occurred in mid-February with an open teleconference. By early March, the commission had a web page up describing its organization and goals.

Randy Brown, director of the Pompano Beach Utilities Department, was elected to chair the new commission.

Other commission members will include representatives of each of the three collaborating organizations named above, who will serve as commission vice-chairs, and four utility seats members will be nominated by the Florida Water Environment Association.

One commission member will represent each of the following stakeholder groups: Agriculture; Department of Health, Environment; Public Health/Medical State

University; and Associated Industries of Florida.

In addition, the Florida Department of Environmental Protection and the five water management districts will serve ex-officio and act as advisors to the commission.

The stated purpose of the group will be to "identify and address technical, regulatory and implementation barriers to potable reuse in Florida. The committee may form working groups led by a commission member to obtain technical information and address questions/issues assigned to the working group by the commission members as a whole."

The commission's goal is to prepare and present an "underlying statutory framework for the implementation of potable reuse" to the 2019 legislative session.

That report, according to the group's website, will "provide leadership in developing the regulatory framework for implementation of potable reuse as an alternative water supply option."

The report's target completion date is the end of 2018.

The commission will publicly notice its meetings in the Florida Administrative Register. Agendas, summaries and other information will be available on their website.

WaterReuse Florida, the state section of the national WaterReuse association, established the commission. The nonprofit organization's mission is to engage in a national movement for safe and sustainable water supplies, to promote acceptance

and support of recycled water and to advocate for policies and funding that increase water reuse.

In fact, the group is one of the most assertive advocates for potable reuse.

A glowing testimonial in the press release by Florida Department of Environmental Protection Secretary Noah Valenstein reinforced the image of an official sanction for this commission, even though DEP administrators have no role in its establishment under state authority.

Potable reuse projects in Florida and California include aquifer injection of purified wastewater treatment effluent, followed by well water withdrawal from the same aquifer for use as feed water for drinking water treatment plants.

The commission will likely have its hands full dealing with the stigma associated with "toilet-to-tap" water as well as the potential health impacts from microbial pathogens and chemical contaminants found in treated wastewater.

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Marine Resources Council completes two-year study of Indian River Lagoon

By PRAKASH GANDHI

The Indian River Lagoon continues to suffer from serious environmental issues including deteriorating water quality, according to one of the most comprehensive studies ever conducted of the lagoon.

The Marine Resources Council recently completed a two-year, \$180,000 study of the lagoon's health. And what the organization found was that the lagoon continues to grapple with a myriad of ecological concerns.

"I think one of the most important things we found is that we need more water quality monitoring in the lagoon," said Dr. Leesa Souto, executive director of the council.

"Unfortunately, funding has been cut at a time when the lagoon needs more monitoring than ever before. We need to get funding back ... especially for water quality monitoring."

The council examined various segments of the lagoon using 20 years of water quality and habitat data.

"We looked at nutrient concentrations, which included phosphorus and nitrogen, turbidity, the measure of algae in the system and seagrass growth," Souto said.

MRC officials divided the lagoon into 10 portions and created a standardized scoring system, ranging from 0 to 100 for each.

MRC assigned the lagoon segments numerical scores based on how close they came to meeting established targets for seagrass growth, water pollution reductions and other parameters.

"We looked at 20 years of data from 33 sources," Souto said. "Nobody has done this before."

"Even though what we found is not surprising, we now have a clear understanding of where the lagoon is in terms of water quality and what needs to be done in the future."

Funding for water quality monitoring in the lagoon took a major hit during the 2018 recession when state officials slashed the budgets of all five water management districts. That cutback had a big impact on the region.

"Water quality monitoring is very im-

portant," Souto said. "You can't manage the system if you don't know what is going on. It is like a doctor treating a patient without knowing what his or her vital signs are."

More than half the lagoon's seagrass died off in 2011 when a super bloom of algae fouled most of the lagoon. Water quality in the northern and southern lagoon has been fairly good recently.

But the Banana River and Sykes Creek areas in the central lagoon have been suffering from a brown tide algae bloom.

MRC officials found that nitrogen levels in the lagoon have been decreasing but phosphorus levels have been going up.

"A lot of the regulations at the state level have been aimed at reducing nitrogen and the nitrogen concentrations have been decreasing, which is good," Souto said. "But we don't know why the phosphorus levels have been going up. Nor can we explain the algae blooms in the lagoon."

"What we believe may be important is not just the concentrations of the nutrients but the ratios of the nitrogen and phosphorus."

The study was funded heavily by local foundations and private donors, and included a \$47,000 grant from the National Estuary Program.

Plus, the effort received a big boost from Brevard County's half cent sales tax expected to raise \$340 million over 10 years for lagoon cleanup.

"We now have a dedicated source of money for the cleanup of the lagoon," Souto said.

Much of the money will go toward dredging organic muck, which clouds up the lagoon, blocking sunlight from seagrass and fueling excess algae growth.

"Yes, things are bad (now)," Souto said. "But a lot of brilliant people have got their brains around this and many people are working to make things better."

"Now that we have all this data, we can do the ecological modeling to predict what will happen. It is going to take a long time, but things will get better."

The full report will be published in April and will be available at www.savetheIRL.org.



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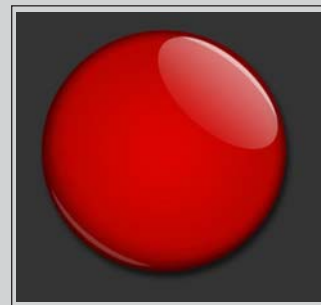
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Memorandum to Scott Pruitt: We aren't buying what you're selling

Specifier opinion

When President Trump announced Scott Pruitt's nomination for U.S. Environmental Protection Agency administrator last fall, we noted that he had neither the technical competence nor policy experience to lead one of the world's premier data science agencies.

Further, he lacked the ethical commitment to lead the EPA's mission to safeguard public health and natural resources.

Now, after his first year at the helm of the agency, we have seen Pruitt display enough questionable ethics and partisan maneuvering to undo two generations of EPA accomplishments.

Pruitt's actions are crippling essential agency programs that protect public health by regulating exposure to toxic chemicals, promote effective environmental stewardship to protect species and ecosystems, and

protect clean water and air resources.

The loss of science

Pruitt rejects far too much of EPA's ecosystem management mission, which has helped ensure ecosystem housekeeping functions that benefit humans. His anti-science denial of climate change with its profoundly adverse consequences is a threat to all of us.

The EPA succeeds because it is a data science agency, one of the top three in the federal government. But because Pruitt is dismissively anti-science, hundreds of world class scientists have left the agency. After all, why would any professional scientist work for a hostile dilettante?

And Pruitt has gone even further to separate the EPA from science by instituting a policy that excludes competent academic and consulting scientists from serv-

ing on EPA advisory panels.

Pruitt's stated goal for this is to ensure that panel members are "independent and free from any real, apparent or potential interference with their ability to objectively serve as a committee member."

Pruitt's propaganda portrays competent scientists inside and outside the EPA as enemies of the people. Rather than risk exposure to their inconvenient truths, Pruitt prefers advisory members with industry backgrounds—those working for companies that impinge on the environment either through natural resource use or emissions and discharges, those that EPA must regulate fairly and effectively.

Loss of knowledgeable EPA staff and scientists will cripple the agency for years, even if Pruitt becomes the next to join the growing number of Trump administration officials to quit or be fired.

Under Pruitt, the EPA stands to completely lose any credibility in climate change policy and science, environmental toxicology of chemicals of emerging concern, adequate chemical regulation under TSCA, pesticide and biocide licensing, and many regional environmental stewardship programs. And that's just for starters.

EPA: Now open for business

As a substitute for rational management in accomplishing the agency's mission, Pruitt has misapplied the empty paradigm of business and commerce as a model for an efficient and productive EPA.

He promotes "new federalism" ideals as a substitute for the past four decades of EPA's public welfare mission on a national and global scale.

Pruitt's recent description of the EPA's core missions, including Superfund cleanup and the brownfield program, describe an agency that is open for business. Let the public be damned.

Pruitt is, in fact, offering the EPA and its critical missions as a child bride to the free "marketplace." It is an arrangement with only the appearance of consent that allows businesses to plunder public environmental resources and avoid the profit-eroding inconveniences of regulatory compliance.

As Oklahoma's attorney general, Pruitt churlishly carried the favor of regional plutocrats and "plundercrats." No sycophant's groveling was too venial for Pruitt to use to ingratiate himself.

Transmitting hand-crafted messages by businesses on his official Oklahoma Attorney General stationery comes to mind as a good example. The model for Pruitt's behavior is replete in every third world country where public officials make it their agency's mission to develop rampant and

extensive patronage networks to enrich the privileged, and maintain partisan political control through their client lackies. Under Pruitt, the EPA is now open for business and closed to the public interest.

Pruitt has placed ideological clones in the regional EPA offices that share his enthusiasm for currying to business interests.

Three of them stand out: Cathy Strepp, Region 6; Anne Idsal, Region 5; and Trey Glenn, Region 4. In one or more significant ways, each has a resume long on business experience and actions in public trust positions that abundantly favor the business elites.

Hardly a public servant

It would hardly be fair, or good business, for Pruitt to make personal sacrifices in the name of national service while doing so much for the wealthy and powerful business class he rubs elbows with. As EPA administrator, he routinely holds closed-door meetings with business interests ahead of major EPA rule and policy changes.

He demanded and received 24-hour, seven-days-a-week security.

His first-class air travel to kibitz with the high and mighty of American business and commerce stand without equal by any other EPA administrator before him.

He has installed a soundproof room at EPA headquarters to keep private his public conversations, both sharply reducing transparency and ensuring that no witnesses in future investigations of his activities will implicate him in perjury, a crime with no statute of limitations.

Pruitt is increasingly aware of the public outrage he has fostered. Like the good plutocrat he aspires to be, he arranges additional personal privileges to avoid it.

He has routinely used first class air travel to avoid the surly plebeians seated in the coach cabin.

In a strange mix of metaphors, he justified his first class travel privileges in an interview with the *New Hampshire News Leader*: "We've reached the point where there's not much civility in the marketplace, and it's created, you know, it's created some issues," he said.

Mr. Pruitt, there is no paradigm of a marketplace where American citizens purchase a stake in the commonwealth. The public policy of environmental stewardship for public health and welfare is a transparent compact between all stakeholders in a democracy. It is not a marketplace where the wealthy vie for further financial gain and winner take all.

Pruitt's odd understanding of public duty, his views of new federalism and lack of transparency, and, most of all, his concept of the EPA "marketplace" have no place in an EPA administrator's mindset.

The EPA should *not* be open for business.

UF study: To help prevent harmful algal blooms, limit both nitrogen and phosphorus

By BRAD BUCK

Algal blooms can kill fish and harm a lake's ecosystem. But by reducing two nutrients together such as nitrogen and phosphorus—not just one or the other—water managers might limit the blooms in lakes and rivers, a new University of Florida study shows.

To come to this conclusion, UF Institute of Food and Agricultural Sciences researchers employed an innovative method used in artificial intelligence.

For years, scientists have argued about whether managing both nitrogen and phosphorus—versus just one of the other—would control harmful algal blooms.

For 25 years, Ed Philips, a UF/IFAS professor in fisheries and aquatic sciences, has worked with scientists at the St. Johns River Water Management District to try to limit nutrients from entering Lake George and imperiling its ecosystem.

Blooms in Lake George come from a group of algae that contain many species capable of producing toxins or otherwise

disrupting ecosystems, Philips said.

Recently, Rafael Muñoz-Carpena, a UF/IFAS professor of agricultural and biological engineering, led a research team with doctoral student Natalie Nelson that reviewed 17 years of data collected by Philips' lab from the waters of Lake George.

Scientists used an approach called Random Forests Analysis that tests the sensitivity of bloom-forming species to several environmental conditions in the lake.

Those include nutrient levels, water temperatures, light levels and densities of aquatic life that feed from the lake bottom.

Researchers found that the major bloom-forming algae in Lake George respond differently to levels of nitrogen and phosphorus, said Philips.

"The results of this study have major implications for future potential directions in managing harmful algal blooms in Lake George," Philips said. "This shows that dual reductions in nitrogen and phosphorus levels may be required to effectively lower the potential for harmful algal blooms in Lake George."

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Plans for Everglades reservoir approved by SFWMD, move to federal level

By **BLANCHE HARDY, PG**

The South Florida Water Management District Governing Board approved the submittal of the Everglades Agricultural Area Storage Reservoir Project's Post Authorization Change Report to the U.S. Army Corps of Engineers in March.

The project's goal is to reduce damaging discharges to area estuaries, meet goals for delivering additional flow of clean water to the Everglades and achieve state water quality standards.

FEDFILE

From Page 2

pollutants falls below the levels that define major sources."

The Natural Resources Defense Council criticized the reclassification proposal as "among the most dangerous actions that the Trump EPA has taken yet against public health."

The rule will take effect after the EPA formally submits a Federal Register notice, and considers public comment.

Agricultural pesticide restrictions. Earlier this year, EPA Administrator Scott Pruitt established an interagency working group to "evaluate and improve" the Endangered Species Act consultation process for pesticide registration.

Citing a "broken" ESA pesticide consultation process, Pruitt said the agreement will "improve and accelerate this process, harmonize interagency efforts and create regulatory certainty for America's farmers and ranchers."

The ESA specifically requires agency consultation for pesticide approvals.

According to the *Washington Examiner*, the new policy is in part motivated by a goal to complete 700 pesticide registrations over the next four years.

The agreement short-circuits agency consultation to protect endangered species and species that could become endangered by new pesticides.

Banned board scientists file suit. In October, 2017, Pruitt announced a ban on scientists who received EPA or other federal research funding from serving on EPA scientific advisory boards.

He said the exclusion ensures that EPA advisory board members are "independent and free from any real, apparent or potential interference with their ability to objectively serve as a committee member," according to an agency news release.

In late December, a group of current and former advisory board member scientists brought suit against the proposed policy claiming that it is both unnecessary and violates the Federal Advisory Committee Act.

Their lawsuit criticized the decision as "arbitrary, without any factual or legal grounding," and in violation of the Federal Advisory Committee Act, which requires advisory committees to be "fairly balanced and protected from inappropriate influence by the appointing authority."

In essence, the lawsuit questions Pruitt's authority to modify the ethics rules as he sees fit.

Lawyers from Earthjustice and the Environmental Law Clinic at Columbia University are representing the plaintiffs.

To replace the scientists removed under the new policy, Pruitt appointed 66 new experts to fill committee vacancies. A substantial number of new appointees come from industry and state government.

Water Transfers Rule upheld. In late February, the U.S. Supreme Court upheld the EPA's Water Transfers Rule.

The rule allows government agencies to transfer surface water between different waterbodies such as lakes and rivers without being required to obtain a National Pollutant Discharge Elimination System permit.

The court's decision upholds the New York-based 2nd U.S. Circuit Court of Appeals, which found that the EPA's 2008 rule

The Florida Department of Environmental Protection reviewed and approved the district's report and plan in March, allowing it to move forward to the district's governing board.

Approval of the submittal to the corps begins the federal approval process to permit cost-sharing for the project between state and federal governments. Approval by federal reviewers is expected to take place late next year.

The PACR report proposed changes to the congressionally approved Central Everglades Planning Project that will amend

was reasonable.

The Supreme Court heard the case under appeal of the decision led by the state of New York and environmental groups led by Riverkeeper Inc.

The lawsuit is generally supported by business interests, the city of New York, the South Florida Water Management District, and about a dozen western states who back the EPA's Water Transfers Rule.

In upholding the appeals court decision that found the EPA's action "reasonable," the Supreme Court punted on the underlying legal question as to whether the Clean Water Act requires permits for water transfers, which might entail water quality standards on water transfers through man-made structures such as water management district canals in South Florida.

it to include the reservoir.

The currently proposed 10,100-acre, 23-foot-deep reservoir, its conveyances and a 6,500-acre stormwater treatment area are estimated to cost \$1.34 billion, a figure lower than that approved by the Florida Legislature in 2017.

"Funding is a 50/50 cost-share with the corps and state putting in \$800 million each," said South Florida Water Management District Spokesperson Randy Smith.

The reservoir will store 240,000 acre-feet of water on property comprised of the district-owned A-2 parcel and lands to the west as identified in Senate Bill 10.

The project, Alternative C240A, will work in accordance with the state's restoration strategies to provide a total of 350,000 acre-feet of above-ground storage south of Lake Okeechobee.

In conjunction with planned and ongoing projects, implementation of the EAA Storage Reservoir project is anticipated to reduce the volume of Lake Okeechobee discharges by approximately 56 percent and reduce the number of discharge events by 63 percent.

District analysis indicates 370,000 additional acre-feet of water per year will be discharged into the Everglades and Florida Bay. Ultimately, the water must be treated to reach sufficient quality to enter Everglades National Park.

"District staff has worked tirelessly

around the clock since the passage of Senate Bill 10 last May to deliver a quality project as directed by the Florida Legislature and the citizens they represent," said SFWMD Governing Board Chairman Dan O'Keefe. "This plan meets all the goals of state law while protecting the estuaries, improving the Everglades and achieving water quality standards. The state has done its part, and now it is time for the federal government to do theirs by approving this dynamic project and sharing its costs."

According to district projections, Alternative C240A will improve upon the previously anticipated gains in restoring the resiliency of the northern estuaries.

Benefits in addition to those already identified by the Central Everglades Planning Project include a 55 percent reduction in high-flow discharge events lasting more than 42 days to the St. Lucie Estuary, and a 40 percent reduction in high-flow discharge events lasting more than 60 days to the Caloosahatchee Estuary.

Environmental advocates favor a larger footprint for the project. There are concerns that Alternative C240A contains insufficient marsh land to treat water to the federal standards required for discharge to the Everglades.

Although advocates supported the purchase of private lands for the project, the district has experienced difficulty finding large landowners willing to sell.

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- 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.

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DEP to allow LAKEWATCH alternative laboratory quality assurance plan

By ROY LAUGHLIN

The Florida Department of Administrative Hearings ruled in early February that the Florida Department of Environmental Protection has the discretion to accept and use water quality data from LAKEWATCH analyzed under an alternative quality assurance plan.

The decision ruled against three certified commercial analytical laboratories that brought suit to ensure environmental analysis integrity.

The lawsuit arose from an updated laboratory certification rule proposed by the Florida Department of Health and a DEP rule that specifically gave certification exceptions to LAKEWATCH, a volunteer program organized at the University of Florida in Gainesville.

LAKEWATCH volunteers collect water samples and send them to a university laboratory for analysis. Their analyte array is limited to those related to primary

productivity and the water chemistry associated with it, including total nitrogen, total phosphorus, chlorophyll a and pH.

When DEP proposed an updated lab certification rule last year, the certified labs challenged the rule giving LAKEWATCH alternative certification.

The labs claimed that DEP's rule was vague, failed to establish adequate standards for agency decisions and vested unbridled discretion in the agency.

Administrative Law Judge D.R.

WALLACE From Page 1

projects include determining the sources of groundwater for the Sulfur Springs in Tampa; the solidification of contaminated wastewater lagoon sediments, then using them as a base for an onsite parking lot; and studying a mostly land-locked mangrove ecosystem in the Caribbean and the effects of additional isolation from seawater.

Alexander rejected all complaints. In particular, he ruled that because of its modest size and specialized focus, LAKEWATCH does not directly compete with the environmental laboratories.

The petitioners, he ruled, lacked standing to challenge the rule on that basis. He also found that because LAKEWATCH's data are not specifically obtained to meet permits or other statutory requirements, DEP may, at its discretion, give the program an exception to the methods and quality as-

WATCH From Page 4

It will increase its transmission capacity to from 700 to 1,300 gallons per minute and increase drinking water storage capacity from 300,000 to 900,000 gallons.

The city began the upgrade in 2014 with \$300,000 from the Northwest Florida Water Management District followed by additional funding in 2015.

The funding underwrote the design and permitting of a new 12-inch transmission main, two new wells and related equipment, and two new 300,000-gallon storage tanks and related pumps and equipment.

The project not only meets the city's current need for improved drinking water system performance, it prepares the city of 1,500 for future growth and increases fire safety.

SRWMD buys Aucilla acreage. Earlier this year, the Suwannee River Water Management District approved the purchase of a 160-acre tract of wetlands along the Aucilla River in Jefferson County.

The land known as the Ware Forest Tract connects two parcels that the district already owns and includes an extensive stand of mature cypress trees.

The purchase in part responds to a public request from Jefferson County residents to purchase the property in order to prevent the owners from logging the cypress trees.

The purchase caps efforts that began in 2015 by the Aucilla/Wacissa River Group and Tall Timbers to obtain title to the property. The water management district purchased the tract for about \$245,000.

The district said it plans to open the tract for public access in 2017 after it drafts a management plan.

Roberts joins SJRWMD board. In February, Allan Roberts of St. Augustine was appointed to the St. Johns River Water Management District's Governing Board.

He will represent the St. Johns River below the Ocklawaha River and the coastal

surance program used to obtain it.

Judge Alexander's decision to reinforce DEP's proposed rule creates two niches for Florida's labs. Commercial labs, the larger niche, will use nationally-formulated quality assurance protocols to produce analytical results that are as accurate as technical protocols can achieve. The second niche, analyses performed by an academic lab, will be considered as accurate as statistical characterization of the entire data set shows them to be.

area between the St. Johns River and Ponce Inlet. He will serve through March, 2020.

Roberts, a lifelong St. Johns County resident, owns First Coast Cattle LLC.

He is a member the Florida Cattlemen's Association and the National Cattlemen's Beef Association.

The appointment is subject to confirmation by the Florida Senate.

NOTES From Page 3

People news. Jennifer Preston joined Universal Engineering Sciences Inc. as their business development representative in Rockledge covering the Space and Treasure Coast markets.

UES also hired Tom Grimm as geotechnical department manager for the Tampa branch office. Grimm will also provide technical support for projects throughout Florida, Georgia and South Carolina.

In addition, the firm hired Amy Fu, PE, to assist in the growth of their Jacksonville office.

The Florida Department of Health announced the appointment of Dr. Thomas Moffses Jr. as administrator for the Department of Health in Columbia and Hamilton counties.

He will be responsible for overseeing all operations including planning, directing, developing and coordinating public health programs and activities.

Previously, he served as an emergency management planner for DOH-Columbia and DOH-Hamilton, a role he had held since 2017.

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