

Florida Specifier

Practical Information For Environmental Professionals

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St. Pete wastewater 6

St. Petersburg officials work to identify essential upgrades to the city's wastewater collection, filtration, storage and disposal systems that will help to prevent future overflows.

Equestrian wastes 7

Palm Beach County commissioners approved a new Comprehensive Land Use Plan classification that allows for the recycling of horse barn bedding and manure from equestrian facilities.

Bombing range cleanup 8

A South Florida developer and a real estate partnership he heads filed suit asking for up to \$30.5 million from the federal government to cover the costs to clean up World War II munitions, munitions debris and chemical-contaminated soil from about 1,400 acres in southeast Orlando.

PSL water farm 13

Port St. Lucie officials are developing plans to build a water farm with seven reservoirs on recently acquired land located along the C-23 Canal, northeast of Lake Okeechobee and west of I-95 and the Florida's Turnpike in western Port St. Lucie.

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A petition for a hearing to stop FPL from using deep well injection to dispose of industrial wastewater from its proposed expansion of the Turkey Point Nuclear Generating Station was denied by the U.S. Nuclear Regulatory Commission.

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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 Buffalo Restoration LLC

Buffalo Restoration LLC technicians manually dig out and remove ordnance and ordnance fragments from land that was part of a former WW II bombing range. The tracked vehicle (center) tows an array of Geonics EM-61 Mk2A time domain electro-magnetic sensors that identifies shallow conductive anomalies, marked here with flags. The remediation project's goal is to completely remove all ordnance, ordnance fragments and ordnance chemical residues that may still be present on parts of a 1,576-acre tract slated for redevelopment. See story on Page 8.

Legislative outlook 2017:

Some plans for the environment face uncertainty

By ROY LAUGHLIN

The annual Florida legislative spectacle—including its impact on the environment and public health—started playing out early this month when the 2017 session convened.

This article discusses aspects of expected environmental legislation, including Gov. Rick Scott's proposed budget and bills filed to date.

Environmental restoration will be a primary focus of new spending in a year when Florida's environmental departments and programs will see declines in budgets and some potential reorganization.

Gov. Scott proposes to increase the state's total 2017-2018 budget by \$1.89 billion to a total of \$83.474 billion. State revenues have grown faster than the budget and the governor has proposed to set aside \$2.8 billion in reserve.

In state agency rankings, the proposed environmental budget ranks seventh in spending behind health care administration, education, transportation, children and families, health and corrections.

Proposed DEP budget

Among the environmental agencies, the state Department of Environmental Protection has the largest budget, and the governor proposes to increase it by \$77 million to a total of \$1.8 billion.

He proposes to decrease department personnel by 38 people, a substantial part of that to occur through the elimination of vacant positions.

DEP's budget changes are concurrent with reorganization and consolidation that include substantial cuts to some programs to allow increases in specific restoration projects.

Several DEP programs centrally managed from Tallahassee would be handed down to the department's six regional district offices. Those programs include air pollution prevention, waste control and water resource protection and restoration.

The proposed budget for new combined efforts shifted to district offices

is proposed at \$45.6 million—about \$1 million less than last year's budget for the separate entities. After reorganization, the district offices are slated for a net loss of 14 positions.

DEP's water science and laboratory services would be consolidated under a new environmental assessment and restoration program with a budget of \$31.2 million, about \$1 million less than last year. The program after reorganization is slated to lose 10 positions.

On paper, DEP's state lands program appears to fare the poorest with \$86 million less budgeted this year than

last. Almost \$3 million of that decline is due to a transfer to the Florida Forever Trust Fund; \$33.5 million dollars is due to transfer to the Florida Forever Trust Fund from the Land Acquisition Trust Fund; and a \$20.5 million is due to a reduction in "recurring fixed capital outlays—not debt service."

Some of these transfers require legislative approval, which the governor's office submitted along with the budget.

A merger of the water resource man-

SESSION
Continued on Page 12

Water management districts approve supply plan for North Florida region

By BLANCHE HARDY, PG

The governing boards of the St. Johns River and Suwannee River water management districts jointly approved the North Florida Regional Water Supply Plan on Jan. 17, 2017.

The districts developed the plan over the past four years.

A 36-member stakeholder advisory committee was assembled to gather perspectives from both its members and the public on water resource issues in North Florida.

"The North Florida Regional Water Supply Plan is the first-ever joint regional water supply plan for 14 North

Florida counties and was developed through a highly collaborative process among the Suwannee River and St. Johns River water management districts and the Florida Department of Environmental Protection, local governments, public supply utilities, environmental advocates and other stakeholders," said Teresa Monson, a spokesperson with the St. Johns River district.

The districts described the plan as the most comprehensive in the region and the result of successful collaboration between participants sharing the common goals of preserving and ex-

PLAN
Continued on Page 15

Matthews named DEP interim secretary

Staff report

In early February, Gov. Rick Scott appointed Ryan Matthews as interim secretary of the Florida Department of Environmental Protection, replacing Jon Steverson at the top spot in the agency.

Matthews had been serving as the department's deputy secretary of regulatory programs before the appointment.

The position will be advertised until April 28 with the goal of naming a permanent replacement at the May 23 meeting of the Florida Cabinet.

Matthews will receive \$150,000 a year, the same salary as his predecessor, while serving as interim secretary.

Matthews and Carl Rasmussen, deputy chief of staff in the governor's office, are seen as two strong candidates to become secretary when the cabinet makes its decision later this spring.

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Latest TRI analysis shows progress on release of toxic air emissions

Staff report

The latest U.S. Environmental Protection Agency's Toxics Release Inventory National Analysis indicates that, in the decade 2005-2015, toxic air emissions decreased 56 percent nationally.

Florida's reduction in air emissions precisely mirrored the national trend.

Nationwide in 2014-2015, the annual decrease was eight percent, a significant decrease contributing to the decade's 56 percent total.

Reductions in hydrochloric acid, sulfuric acid, toluene and mercury were four chemicals with significantly lower air emissions in the most recent reporting year.

In mass terms, combined hydrochloric and sulfuric acid emissions fell by more than 566 million pounds. Toluene fell by more than 32 million pounds. Mercury declined more than 76,000 pounds.

Coal- and oil-powered electric utilities account for greater than 90 percent of the nationwide reduction in releases of these contaminants into the atmosphere. The shift from these fuels to natural gas to generate electricity is responsible in the past decade for cutting these health threatening air emissions by more than half.

According to an EPA press release, "medical professionals have associated these toxic air pollutants with health ef-

fects that include damage to developing nervous systems and respiratory irritation."

The Toxics Release Inventory reporting includes data for solid waste generated nationwide. In 2015, almost 26 billion pounds of toxic chemical wastes were produced nationwide.

Approximately 92 percent of those wastes was subject to preferred waste management practices including recycling, energy recovery and treatment, and was not released to the environment.

Mining sector wastes, which are not included in the TRI reduction tally, remain the only major category of wastes that have not been reduced significantly because of "limited opportunities for pollution prevention," according to the agency.

About 22,000 facilities including manufacturing, metal mining, electric utilities and commercial hazardous waste management submitted information for the most recent report.

New chemical risk assessment rules. In January, the EPA proposed three new rules to meet the requirements of last summer's Frank R. Lautenberg Chemical

Safety for the 21st Century Act.

The first of the rules, the Inventory Rule, requires manufacturers and importers to notify EPA regarding chemicals still being produced. This will help the agency to weed out some of the 85,000 chemicals currently on the inventory that are no longer produced.

The second proposed rule, the Prioritization Rule, characterizes EPA's use of a risk-based screening process and its criteria that designates whether a particular chemical will be classified as high or low priority.

Under the proposed law, chemicals designated as high priority must undergo evaluation while those designated as low priority will not. This applies to all chemicals, whether they had been grandfathered in under the Toxic Substances Control Act 40 years ago or have entered the market more recently.

The Risk Evaluation Rule, the third proposed, establishes the methodology for evaluating risks of existing chemicals.

The rule establishes a risk evaluation process that will include identifying hazards and exposures that bear on characterizing and determining risks. The agency

will begin publishing the scope of the assessments early in the process.

The Risk Evaluation Rule also outlines the efforts that the agency intends to make to obtain public comment on the chemical evaluations.

The EPA initiated Lautenberg Act risk assessments of 10 chemicals in early December last year. The act requires that by the end of 2019, the agency must be conducting at least 20 ongoing evaluations.

Under the Lautenberg Act, when a risk assessment determines an unreasonable risk, the EPA is required to eliminate that risk through regulation.

The EPA issued its first chemical ban 25 years when it ruled that trichloroethylene could not be used in aerosol spray cleaning products.

The EPA is now seeking public comment on the three proposed rules.

Federal loans for large water projects. In the final days of the Obama administration, the EPA announced the availability of approximately \$1 billion in "credit assistance" under the new Water Infrastructure Finance and Innovation Act program.

The program provides long-term, low-cost credit assistance including direct loans and loan guarantees to "credit worthy water projects."

The WIFIA program is one option for financing large infrastructure projects budgeted for at least \$20 million.

The program's budget is currently only \$17 million, but EPA estimates that funds appropriated to the WIFIA can be leveraged at a ratio greater than 50 to one, which could allow the agency to make approximately a billion dollars in loans and stimulate about \$2 billion in total infrastructure investment.

The WIFIA's loans are intended to work in tandem with the State Revolving Fund program operated by most states including Florida and the bond market to provide funding for water infrastructure projects.

Intended types of projects include drinking water treatment and distribution, wastewater conveyance and treatment, enhanced efficiency upgrades at drinking water and wastewater facilities, desalination, aquifer recharge, alternative water supply and water recycling, and drought prevention, reduction or mitigation.

The agency will evaluate projects based on criteria that include whether the project is nationally or regionally significant, helps maintain or protect public health or the environment, protects against extreme weather or serves regions with significant water resource challenges.

The selection of supported projects will be done on a competitive basis.

The loan program provides an important funding opportunity for cities, regional water initiatives and other types of larger water projects.

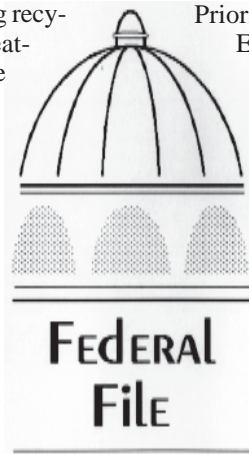
State Revolving Fund grants are usually only for a few million dollars and many smaller cities are not able to bond the \$10-\$20 million for significant water treatment plant upgrades without the assistance this funding program provides.

The EPA estimates that over the next 20 years, the U.S. will need \$660 billion in infrastructure spending for drinking water, wastewater and stormwater infrastructure.

This year's investment covers about seven percent of the annual need to meet the infrastructure improvement goals.

Assistance for small utilities. The EPA didn't overlook small drinking water and wastewater systems for funding opportunities in the Obama administration's final weeks.

In addition to WIFIA's funding, the agency announced awards of \$12.7 million to organizations that provide training and technical assistance to the staff of small drinking water and wastewater systems.



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We had such a great time at last year's hurricane-rescheduled conference in December that we decided to do it in December again (without the hurricane).

Watch the pages of the *Florida Specifier* for the Call for Papers.

FEDFILE
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Owner of Panama City landfill charged with felony

Staff report

Five years after abandoning a contaminated landfill in Northwest Florida, the landfill's owner, William Todd Schweizer, was charged with a felony for commercial littering in excess of 500 pounds.

Schweizer owned the Coyote Land Company Inc. when it abandoned operations at the Coyote Panama City Waste Processing Facility.

Schweizer plead not guilty to the charge and demanded a jury trial.

Authorities accused Schweizer of unlawfully dumping more than 500 pounds of litter on private land for commercial purposes in August, 2011.

The city of Panama City, Bay County and the Florida Department of Environmental Protection joined forces to clean up the Coyote Landfill after the transfer station was labeled an environmental hazard and closed in August, 2011.

Local and state agencies cleaned up the mess for about \$680,000.

Dredge lawsuit. A plan to dredge sand from Big Pass to renourish Lido Key beaches met with opposition from the Siesta Key Association and a longtime Siesta Key resident.

The lawsuit contends that the proposed dredging violates the Sarasota County comprehensive plan that prohibits dredge and fill activities, except to maintain previously dredged channels or drainage canals.

The Siesta Key Association decided to pursue the lawsuit after the U.S. Army Corps of Engineers denied a request by the association and the Sarasota County Commission to conduct a second and more exhaustive environmental study of the project last November.

The environmental impact statement would have required a more intensive and widespread review of the potential effects of the dredging project.

Siesta Key officials said the permit plan includes extensive monitoring measures that would require immediate corrective action if any adverse impacts were detected around the project.

Solar projects. Two solar power projects are underway at Eglin Air Force Base.

Officials gathered in January for the installation of the first two solar photovoltaic panels.

The projects, along with a third at NAS Whiting Field's Holley Outlying Landing Field, are expected to be among the state's largest solar installations.

The projects involve about 1.5 million solar panels capable of generating up to 120 megawatts of electricity.

The facilities are expected to be operational this summer.

Gulf Power and its third-party developer, Coronal Energy, are building the facilities. The projects support the U.S. Department of Defense's commitment to renewable energy.

The energy produced will serve Gulf Power customers across Northwest Florida.

The facilities will have the potential to reduce carbon dioxide emissions by more than 3.5 million tons over 25 years.

More solar. The western Orange County city of Ocoee is planning to build two solar farms.

One of the city's solar farms will be located at its Utilities Administration Building. The second will be built at the South Water Treatment Plant. Each will measure about 200 feet long and 16 feet wide.

City officials said that Ocoee spends more than half a million dollars annually on electrical energy. They hope the solar farms will offset a good portion of that cost.

The estimated cost per solar farm is \$80,000-\$85,000. The funding will be taken from fiscal year 2016 and 2017 budgets.

Officials said it will take about 12 years

to recover the initial costs.

The locations were chosen due to the high energy demands of the two buildings.

The life expectancy of the farms is about 25 years.

Over the next five years, the state is expected to install 2,315 megawatts of solar electric capacity, which would bring its capacity rank up to 9th in the nation, according to the Solar Energy Industries Association.

New waterkeeper. John Cassani is the new Calusa Waterkeeper.

In this role, Cassani, retired deputy director of the Lee County Hyacinth Control District, will work to protect and preserve the waters of the Caloosahatchee region.

His territory will be from Lake Okeechobee west through the Caloosahatchee River to the coastal estuaries and near-shore waters.

Cassani helped found the Southwest Florida Watershed Council in 2001.

Calusa Waterkeeper is the new name for the nonprofit Caloosahatchee River

Citizens Association, also known as CRCA Riverwatch, that was formed 21 years ago to support the health of the Caloosahatchee and its watershed.

The group is part of Waterkeeper Alliance, a global movement uniting more than 300 waterkeeper organizations around the world.

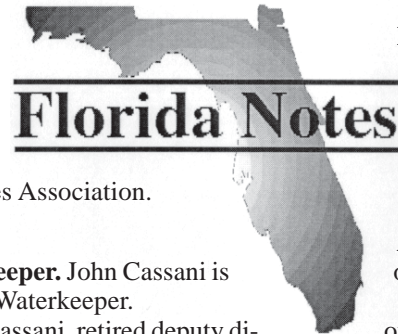
More people news. Alex Chatham, PE, joined SCS Engineers as a project director in the firm's Boca Raton office. He can be reached at (954) 571-9200.

Jay Saxena, PE, joined Ayres Associates as vice president of Southeast U.S. operations.

He brings more than 20 years of engineering and business management experience to the company and will oversee Ayres' Florida offices in Jacksonville, Titusville, and two in Tampa.

Douglas Stoker, PE, was promoted to the role of business unit leader in Cardno's Americas Region.

He will manage the infrastructure team's Southeast U.S. business unit where he will lead business development efforts, focusing on client relationship management and the career development and growth of staff.



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Recent monitoring confirms role of nitrogen enrichment in southern Indian River Lagoon

Staff report

Results from an annual automated sampling program in the southern Indian River Lagoon corroborate significant inputs of nitrogen from area canals including the C-24 canal in Martin County.

Eddie Widder, PhD, chief executive officer of the Ocean Research and Conservation Association Inc. in Fort Pierce, recently discussed nitrogen loading during a summary of her organization's lagoon monitoring efforts.

The group focused on the results of monitoring nutrient levels in muck from the bottom of canals emptying into the Indian River Lagoon.

Widder noted that up to 20 inches of muck has accumulated over the years in drainage canals, including C-24.

The muck accumulation creates anoxic conditions that play a key role in transforming oxidized nitrogen to very mobile ammonia that sparks algal blooms.

The link between muck and ammonia led Widder to suggest that dredging muck from canals could be an effective measure to reduce algal blooms following high drainage volume releases to the Indian River.

The drainage canals she studied differ significantly from residential canals that

were linked to algal blooms in the Banana River.

The residential canals are not drainage canals but, like drainage canals, they fill with muck, creating anoxic conditions that can chemically reduce oxidized nitrogen to ammonia in a similar way.

Widder noted that the original nitrogen sources could originate from both agricultural operations and septic tanks.

Her research received funding from local and state sources last year, and she's hoping this year to continue IRL monitoring with a special focus on ammonia and its role in promoting eutrophication.

Destin as a port? Taylor Engineering of Jacksonville landed a contract from the city of Destin to prepare a report on the options for developing a port in the Panhandle city.

Taylor Engineering is charged with characterizing the prospects of establishing a port and waterways district in Des-

tin. The report will look at both establishing a harbor and developing the city's other extensive waterways, including Destin's bayous.

The report will also advise city officials of the costs, procedures and potential schedules to establish and operate a port-waterways district. It may also characterize opportunities for public-private development of a port facility in Destin.

According to local accounts, the city manager characterized the effort at the city council meeting as only "a very preliminary assessment."

City officials are particularly interested in any circumstances that could block or interfere with future port development.

Reimbursement for Pasco project. Pasco County officials agreed to a mediated settlement with King Engineering Associates Inc. addressing cost overruns due to design failures associated with a reclaimed water reservoir in Land O'Lakes. The county agreed to accept \$400,000

—almost equal to the \$419,058 that they have paid the Tampa law firm of Mills, Paskert and Divers for litigating the dispute since 2007.

The lawsuit followed the discovery of structural failures of a 100-million-gallon reclaimed water reservoir that King helped design.

King and its subcontractor allegedly failed to adequately advise county officials of sinkholes under the reservoir or to design properly for them.

Although the county's contract included grouting the sinkholes, it failed to approve \$2 million for a recommended reservoir liner that would have provided additional protection from failure due to sinkholes.

The final price of the reservoir construction that resolved sinkhole-associated flaws, \$22.4 million, was six times the original estimated construction cost and \$8 million above the bid price of \$14.1 million.

The Southwest Florida Water Management District paid \$5.6 million of the construction costs with Pasco County paying the balance.

After nine years of legal effort, only one of the sitting commissioners who voted on the original construction contracts remains in office.

The other commissioners that approved the project in 2006, the county administrator and the assistant county administrator overseeing utilities are no longer serving in Pasco County.

The redesigned reuse water reservoir, by all accounts, is now working as intended when it was originally designed more than a decade ago.

Clearwater system upgrades. Stormwater and sanitary sewer systems in Clearwater's East Gateway area will be completely replaced and upgraded following Clearwater City Council approval.

The council approved an \$11 million spending measure to underwrite the project.

The area slated for new stormwater and wastewater infrastructure is bounded by Cleveland Street, Gulf to Bay Boulevard, Court Street and South Missouri Avenue.

The stormwater projects include approximately 10,800 linear feet of pipe, 110 inlets, 49 junctions and five sediment-trapping baffle boxes.

The baffle boxes and other inlet upgrades will increase the capture and treatment capacity before stormwater runoff enters Stevens Creek.

Interflow Engineering LLC of Tampa designed the system and David Nelson Construction Co. of Palm Harbor is the construction contractor.

The Southwest Florida Water Management District contributed \$1,750,000 towards the project.

Construction will begin in March, 2017, with completion expected within a year.

Pensacola wetlands park. In January, the Pensacola City Council approved \$2.2 million to construct a regional stormwater treatment facility at the city's Bill Gregory Park.

The plan includes construction of a 2.5-acre pond to collect and treat stormwater runoff from an adjacent 40 acres of surrounding neighborhoods.

The treatment provided by the new facility will improve water quality in Bayou Chico and its watershed by preventing stormwater-borne pollutants and debris from entering the river.

The pond and adjoining wetlands are being constructed to serve as a wetland habitat for plants, birds and other aquatic organisms.

The work at Bill Gregory Park is one component of Pensacola's greater effort to improve Bayou Chico water quality. Bayou Chico has been called one of the most polluted waterways in Florida.



Florida Specifier 2017 Drillers Directory

If your organization provides environmental or geotechnical drilling or direct push services, you're invited to complete and return the form below. Our annual directory will appear in the May issue. **There is a fee of \$100 to list your firm.** (The fee is waived for current *Florida Specifier* advertisers and FRC 2016 exhibitors.) Please type or LEGIBLY print the information requested and return as soon as possible to Mike Eastman via fax at (407) 671-7757, e-mail mreast@enviro-net.com or mail to P.O. Box 2175, Goldenrod, FL 32733. You can reach us by phone at (407) 671-7777. **If you were included in last year's directory, there is no need to complete this form—we will be in touch.** The deadline for submitting listings is **Wednesday, Apr. 5, 2017.**

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WATCH _____
 Continued on Page 5

IFAS study shows Floridians place high priority on forest, water conservation

By PRAKASH GANDHI

Voters in Florida want to preserve forests and water, according to a new study that shows strong support for protecting the environment among Sunshine State residents.

The study conducted by the University of Florida Institute of Food and Agricultural Sciences showed that demand for ecosystem protection is on the upswing.

"Florida voters have approved far more referendums, compared to other states, and are more likely to vote 'yes' to conserve rural lands in more recent years," said Melissa Kreye, a post-doctoral researcher in the UF/IFAS' School of Forest Resources and Conservation and a study author.

Kreye and Damien Adams, an associate professor at the school, examined the results of 76 referendums that proposed to preserve rural land in 14 states between 1991 and 2013. Florida conducted 26 of the 76 referendums studied.

They found that taxpayers nationwide

spent about \$59 billion to conserve rural lands in 1,300 voter-approved referendums between 1998 and 2012.

In the 26 referendums examined closely, Florida voters approved an average of \$108 million dollars in conservation funding, and were more likely to support bond issues than tax increases, Kreye said.

Florida is the third most populous state in the country with over 20 million residents. Nonpoint sources of pollution have put increased pressure on water resources here.

"The study suggests that people are aware of changes in environmental quality due to the loss or conversion of forests and are willing to pay increasingly more to prevent further changes," Kreye said.

According to forecasting models, southern states could lose between 30 and 43 million forest acres to urbanization between 1997 and 2060.

Kreye said slightly more than a quarter of the land base in Florida is owned by state and federal governments. Decision-

makers have been using land acquisition and conservation easement programs, along with technical and financial assistance programs, to help protect public benefits in Florida, she said.

Concurrent with the voter preferences study, a statewide survey was conducted using a question format similar to a referendum question. It found that Floridians are willing to pay an annual average of \$154 million to \$230 million to protect forest and water resources in the state.

"Programs that provided recreational benefits and guaranteed that resources would be protected into the future were found to be the most preferred," she said.

The processes used to implement the proposed forest-water protection program also had a significant impact on public strategies to pay for conservation actions, she said.

Floridians were willing to pay the most for programs that use conservation easements and were implemented by non-governmental conservation organizations.

Floridians also expressed strong support for landowner assistance programs.

Kreye said these studies indicate that people in Florida not only place a high priority on conservation but also have opinions about which programs should be used to produce conservation outcomes.

WATCH From Page 4

Other Pensacola projects to improve its water quality include the Maggie's Ditch project that will receive and treat stormwater runoff from commercial properties covering 225 adjacent acres.

The Jones Creek and Jackson Creek stream and wetland flood plain habitat restoration project is also underway along the western branch of Bayou Chico.

Funding for the \$2.2 million effort comes from the Gulf Environmental Benefit Fund managed by the National Fish and Wildlife Foundation. Fines from the Deepwater Horizon oil spill capitalized the fund.

Panama City-based Gulf Coast Utilities Contractors is the lead contractor for construction.

Construction began in mid-February, with expected completion by the end of the year.

Collier assumes utility ownership.

After a nearly five-year legal battle, Collier County reached a settlement with the Ronto Group to take over the operation of a drinking water utility in eastern Naples.

The Orange Tree Utility Co. serves several gated communities as well as commercial properties on Immokalee Road and Randall Boulevard. The county assumed ownership on March 1, 2017.

The utility, owned by private investors, began operation in the 1980s because neither adjacent cities nor Collier County had built a water supply system for the area.

The county approved the private utility with the understanding that it could take it over at no cost when county water and sewer lines were extended sufficiently to allow tie-in.

In 2013, when the county was ready to tie in, the owners refused to allow it. At issue was a \$2 million difference between \$12 million in earnings the system provided its investors, and \$10 million they invested into the drinking water utility.

Under the settlement's terms, county officials let the utility's investors keep the money.

County officials said the agreement was fair because the county will get a utility with a capitalization of \$15 million in annual gross revenues of \$1.7 million.

Plus, it ends five years of litigation expense.

Local reports said that customers look forward to better service under Collier County ownership than they received from the private utility's owners.

Lack of water has delayed the opening of some businesses, including a new Publix supermarket, which is likely to get water soon after Collier County takes control in March.

Flagler County waterfront park. After a decade of habitat restoration projects, Flagler County officials, and state and local dignitaries officially celebrated the suc-

cessful completion of the Smith Creek Landing in North Peninsula State Park and the Gamble Rogers Memorial State Recreation Area.

The project removed dredge spoil covering more than 100 acres of former marsh, dumped there decades ago when the Intracoastal Waterway was dredged.

The phased restoration project removed the dredge spoil, lowering the land's elevation to the level of the former marsh.

A decade's worth of incremental habitat restoration progress is now completed with visible results.

The marsh and its adjacent sandbars are filled with birds, and marine life is abundant within the restored salt marsh and tidal creek habitat.

Oysters grown in oyster bags help stabilize the shoreline.

Local volunteers contributed a substantial amount of the effort over those many years when they planted cord grass and provided additional labor for the habitat restoration.

The St. Johns River Water Management District and DEP's Florida Park Service are among the government agencies that cooperatively funded the restoration project.

Multiple volunteer groups provided in-kind labor.

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St. Pete implementing extensive wastewater system infrastructure upgrades

By ROY LAUGHLIN

In September, 2016, flooding rains from Tropical Storm Hermine overwhelmed the city of St. Petersburg's wastewater collection system.

Peak flows to two treatment plants in the St. Petersburg utility system, the Alfred Whitted Water Reclamation Facility and the Southwest Wastewater Treatment Plant, were inundated with 84 million gallons of wastewater per day.

The two plants were forced to release their sewage overflow to Tampa Bay and its tributaries.

Since 1890, only three instances of rainfall in a three-day interval or week exceeded Tropical Storm Hermine's rainfall totals.

Inflow and infiltration through aging pipes filled St. Pete's wastewater collection system with far more than its wastewater treatment plants could process.

At least 138 million gallons of untreated or partially treated sewage were released into Tampa Bay and its tributaries from the two plants, as well as an unknown additional amount from manholes on city streets.

When a similar but less voluminous

overflow occurred during Tropical Storm Colin several months earlier, St. Pete's utility system was just weeks away from completing expansion work on its Southwest Wastewater Treatment Plant.

Officials with the Florida Department of Environmental Protection met with members of the city's utility department officials shortly thereafter, but did not seek penalties.

The utility agreed to install a second injection well and additional pumps at the southwest facility. In addition, they agreed to undertake wastewater system upgrades including expanding sewer mains between treatment plants, and relining or repairing its collection system.

Last summer, the city council approved spending \$3 million of its Deepwater Horizon oil spill settlement funds to reline and upgrade its sewage collection system.

That work was in progress in September when Hermine hit.

Since last October, DEP has worked closely with St. Pete officials to identify essential upgrades to the city's wastewater collection, filtration, storage and disposal systems that will prevent future overflows.

In December, 2016, DEP sent St. Pete officials a draft consent agreement that incorporated many of their findings and conclusions. It required substantial system upgrades and repairs, reimbursement to DEP for its efforts and, potentially, an \$840,000 fine.

The draft agreement, still under negotiation, outlines requirements for the city to install four Class I deep injection disposal wells to a depth of 1,100 feet at its Northwest Wastewater Treatment Plant, and two more at its southwest plant within the next five years.

The draft agreement requires substantial expansion of filtration and sanitation equipment to treat wastewater pumped through the new injection wells.

It also requires the city to undertake an extensive study of its wastewater collection system to identify parts that need replacement and upgrade. A specific focus of that study will be the status of the Alfred Whitted facility near downtown.

The aging Whitted plant was in the process of being shut down before Tropical Storm Colin hit.

Before it was closed, St. Pete had a combined capacity of 68 million gallons per day among its four plants. Following closure, that fell to 56 million gallons per day.

City officials will now revisit the feasibility of reactivating the Whitted facility to increase the sewage system's capacity to handle excess volumes during flooding rains.

St. Pete will also be required to reduce inflow and infiltration into the sewer collection system.

As of March, 2017, the St. Petersburg Utility Department will have completed collection system relining work under two contracts.

Bill Logan, communications manager for St. Petersburg's Public Works Department, estimated that about 20 percent of the city's wastewater collection system, primarily mains, has been relined or upgraded.

He said that the city will continue to reline and upgrade its wastewater collection system, including lateral lines in subdivisions and neighborhoods.

The assessment report mandated in the draft consent agreement requires the work plan to prioritize the lateral lines in the worst shape so that they can be relined, replaced or upgraded first.

It also requires manhole cover rehabilitation to prevent stormwater from flowing off pavements into the wastewater collection system.

Most of the project components in the draft agreement are tentatively scheduled to begin in 2017 and 2018, and to be completed by 2021.

After Tropical Storm Colin's overflows, city officials appropriated money and began wastewater system improvements that are still in progress.

St. Pete is now in the process of planning and permitting four deep disposal wells at its southwest plant and the city is drilling a well on a fast-track schedule, working 24 hours a day, so that the injection well and its filtration equipment will be operational by June, 2017.

A second planned well to be drilled at the southwest plant is currently out to bid, according to Logan.

The draft agreement also requires a deep injection well at the northwest plant. The St. Pete Utility Department has selected two candidate sites at the plant.

In March, officials scheduled public hearings to finalize details on the number and location of additional wells at the southwest and northwest plants.

"Plans are moving forward with as much capacity as DEP will allow in the permitting process," said Logan, describing how city officials will modify plans they made before DEP drafted its consent agreement.

City officials acknowledge that their disposal capacity has to increase.

"The devil is in the details," said Logan. "And we're all living in the details now since the problems have cropped up."

The city currently has a 45 million gallon per day disposal capacity. Once the planned new wells come online, the capacity will increase to 110 million gallons per day.

St. Pete Mayor Rick Kriseman's budget estimates the cost for the reliability improvements at three plants to be \$85 million through 2021.


Each well could cost up to \$3 million to drill. Collection system upgrades will cost \$74 million and increasing capacity could cost as much as \$100 million.

The city is looking at a total of \$259 million for the work with the funding source "to be decided" through 2021.

Over 20 years, the utility system maintenance and upgrades are expected to cost \$304 million.

The city previously budgeted \$161 million, leaving an additional \$143 million shortfall.

DEP's draft consent agreement is still under negotiation. When concluded, St. Pete will have a clear path forward incorporating sewage system upgrades that will provide area residents with a cleaner environment and public health benefits moving forward.



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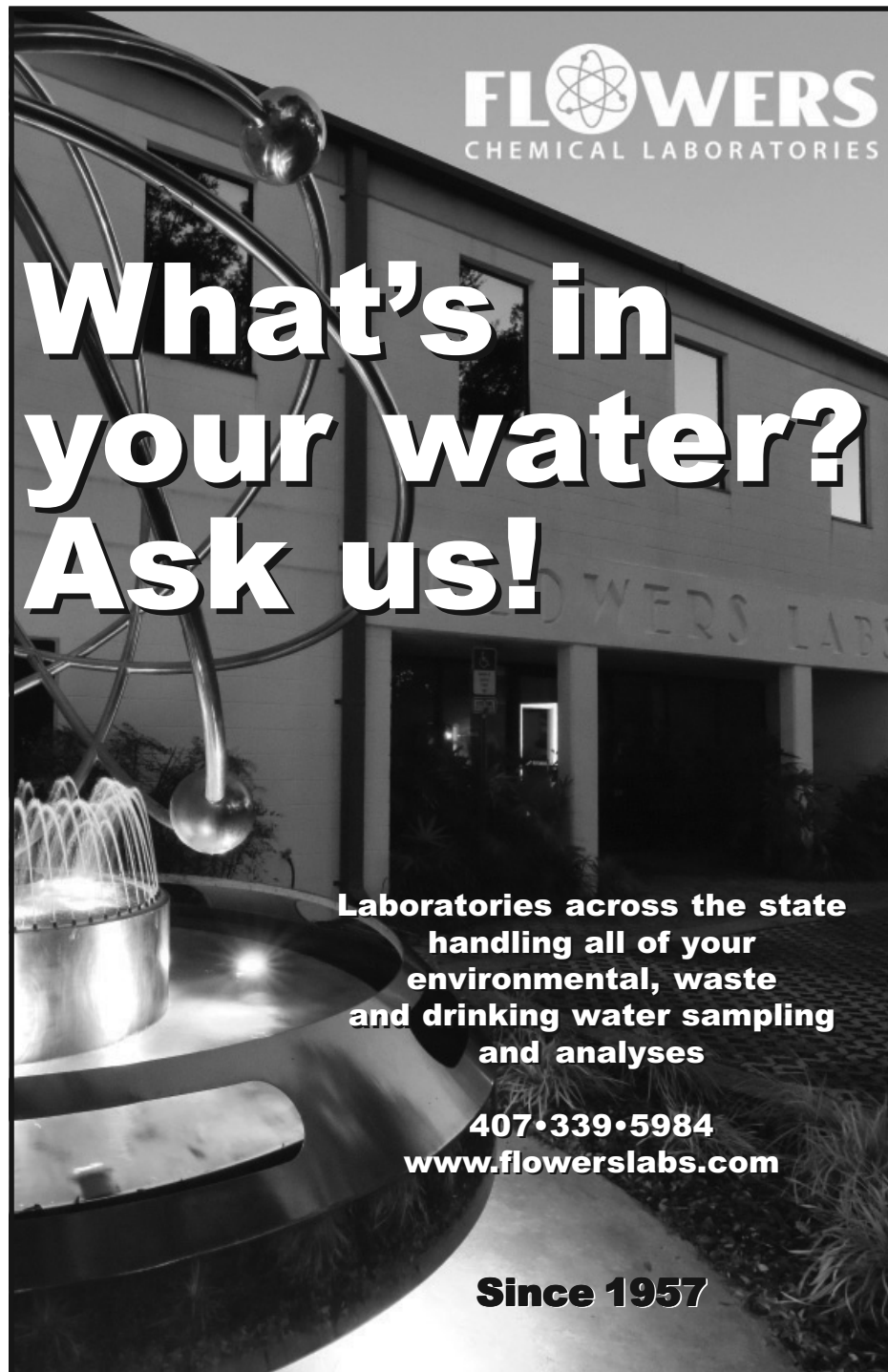
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Census 2016 shows fast growth in solar jobs

Staff report

Florida gained 1,700 solar industry jobs in 2016, a 26 percent increase in the state's solar workforce, according to the National Solar Jobs Census 2016 released by The Solar Foundation.

The state now has a total of 8,260 solar workers, up from 6,560 in 2015, and ranks fifth in the nation for the number of solar jobs.

Census 2016 is the foundation's seventh annual report on the solar workforce.

The report found the American solar workforce grew at a historic pace in 2016, in a year when one out of every fifty new U.S. jobs was in the solar industry.

Nationwide, solar industry employment outpaced the overall U.S. economy by 17 times as it increased by over 51,000 jobs, for a total of 260,077 U.S. solar workers.

The American solar workforce grew by 25 percent over 2015, the largest annual growth percentage since first Census report in 2010.

Solar job growth took place in all job sectors, including a 26 percent growth in manufacturing companies to 38,121 jobs nationwide.

Installation jobs increased by 14 percent to a total of 137,133 jobs. Project development jobs increased by 53 percent to 34,400 jobs, and sales and distribution jobs increased by 32 percent to 32,147 jobs.

Palm Beach County creates new land use category for recycling of equestrian wastes

By ROY LAUGHLIN

In January, Palm Beach County commissioners approved a new Comprehensive Land Use Plan classification to allow for the recycling of horse barn bedding and manure from equestrian facilities.

The land use classification change defines a new category called Glades Tier. The land in the new classification for equestrian waste recycling is located in the Everglades Agricultural Area between Belle Glade and the eastern boundary of the EAA.

The classification is not meant exclusively for horse manure and equestrian barn bedding. Other agricultural uses consistent with the newer composting, primarily involving growing plants and crops, is also allowed.

The measure is intended to move horse manure and barn waste handling away from the village of Wellington and other enclaves where equestrian activities are part of the lifestyle into agricultural areas where manure and sawmill shaving composting is less intrusive.

According to one estimate, a single horse produces 50 pounds of manure and

barn waste a day. At peak season, when equestrian events bring horses and riders from around the country, Wellington's horse population swells to 12,000 animals.

Palm Beach County officials estimate they produce 180,000 tons annually of equestrian waste, peaking when the horse population swells during equestrian events each spring.

Disposing of the waste is currently the responsibility of equestrian facility owners. They pay haulers to remove it.

Local newspaper reports include allegations that some haulers dump the wastes illegally on private land.

For the last three years, U.S. Sugar has spread equestrian wastes on a 250-acre parcel in the EAA. The company handles an estimated 80 percent of the county's equestrian waste.

The waste contains nitrogen and phosphorus that fertilizes crop plants over time when the manure is spread on crop fields.

In a *Palm Beach Post* opinion piece, William Louda, a research professor at Florida Atlantic University, wrote that horse waste land-spreading contributes about 730,000 pounds of phosphorus per

year to the land.

He also noted that on one site, a landscaping plant nursery where horse wastes are used, runoff water contained almost 8 milligrams of phosphorus per liter.

Landscape plant nurseries use equestrian wastes as a soil amendment rather than as a source of fertilizer for their plants. Landscaping nurseries also use notably large quantities of water and fertilizer to grow their plants.

Nutrient contributions in their runoff are much less affected by manure use than by intentional fertilization and watering practices.

Nevertheless, Palm Beach County officials view equestrian waste-spreading on crop lands as less desirable than composting and reusing it for urban and suburban

landscaping.

Before 2008, landscape nurseries in the Palm Beach area were a prime user of equestrian wastes. Their need tapered after the recession, but may be recovering now.

Designating an area for the composting and recycling of equestrian wastes at least partially addresses concerns about nutrients that leach from crop fields.

Neither Palm Beach County nor the village of Wellington appear to want to operate composting facility themselves. Their public officials expect composting businesses to locate in the designated tier area to recycle the wastes as a sustainable economic activity.

It may be months before recycling facilities are in operation. In the meantime, manure spreading on fields in the EAA is likely to continue.

Coalition issues environmental to-do list featuring reservoir south of Lake O

By BLANCHE HARDY, PG

The 62-member Everglades Coalition has issued an environmental "to-do" list to President Donald Trump. The list includes projects such as repairing Lake Okeechobee's dike, elevating Tamiami Trail to allow water to flow below it and funding the \$2 billion Central Everglades Restoration Plan.

But the dominant project on the list is construction of the proposed \$2.4 billion reservoir south of Lake Okeechobee.

The coalition's list is included in a Feb. 3, 2017, letter to Trump from Congressman Francis Rooney, R-Naples, and the entire 27 member Florida delegation of elected legislators. It reminds Trump of his promise to Floridians to "work alongside you to protect and restore the beautiful Florida Everglades."

The Florida delegation made special note of the need for funding in the federal government's 2018 budget to continue the Central Everglades Restoration Program.

"The Everglades ecosystem spans across 16 counties and 164 cities in Florida," they wrote. "It has a \$3 trillion economic impact and 55 percent of the real estate value in the state of Florida is tied to it."

The letter points out the problems generated by the discharge of excess water from Lake Okeechobee noting that the lake "fills up six times faster than it can be drained resulting in massive discharge into the surrounding watershed."

Construction of a southern reservoir has been under discussion for over a decade and a half. It is intended to control discharges from Lake O into the St. Lucie and Caloosahatchee river systems and ultimately into the Indian River Lagoon and Gulf of Mexico.

The reservoir was approved as part of the 2000 Comprehensive Everglades Restoration Plan authorized by Congress.

State Rep. Thad Altman, R-Rockledge, recently filed House Bill 761 to build the reservoir. The bill mirrors Senate Bill 10 filed in late January by State Sen. Rob Bradley, R-Fleming Island. That bill has already cleared the Senate's Environmental Preservation and Conservation Committee.

Both bills support a proposal from Florida Senate President Joe Negron, R-Stuart, for the state and federal governments to split the \$2.4 billion cost of purchasing the 60,000 acres of land south of Lake Okeechobee and building a 120 billion-gallon reservoir.

Supporters point to the benefits of a southern reservoir such as avoiding an

other round of deadly toxic algal blooms, reducing coastal fishing grounds pollution, protecting Everglades and shoreline wildlife and plants, and minimizing adverse impacts to beach tourism and Everglades National Park.

But not all lawmakers are on board.

The opposition questions the ability of the proposed reservoir to stop the discharges from the lake. Many of the residents and businesses south of the lake are in the Everglades Agricultural Area and maintain their agricultural roots.

The sugar industry is strongly opposed to losing more agricultural land south of the lake, having already shuttered processing facilities during less profitable times and now enjoying a resurgence in sugar sales. They claim the reservoir could spell an end to their livelihood.

Both bills direct the South Florida Water Management District to find land owners willing to sell property in the EAA for the south reservoir.

Florida sugar interests issued written notice indicating that none are willing to sell. In the event the reservoir land isn't found, the state has until 2018 to execute an agreement entered into with U.S. Sugar Corp. in 2010 to sell its land to the state.

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Miami developer sues feds to recover costs for Orlando bombing range cleanup

By ROY LAUGHLIN

John Brunetti Sr., a South Florida developer, and Mockingbird Orlando LLC, a real estate partnership he heads, filed suit asking for up to \$30.5 million from the federal government to locate and remove World War II munitions, munitions debris and chemical-contaminated soil from about 1,400 acres in south-east Orlando.

The site is near the Lake Nona Medical City complex. During World War II, the property was known as the Pine Castle Bombing Range. Part of it was referred to as the Pinecastle Jeep Range.

Brunetti received approval from the city of Orlando to build the first of two planned developments, Vista Park, and plans to develop a second, Starwood, on the former bombing range.

Combined, the two planned developments include 7,700 new homes, 140,000 square feet of office and commercial space, 150,000 square feet of retail space and 150,000 square feet of industrial space.

The city's approval is contingent upon soil and groundwater cleanup activities to ensure that the site is cleared of unexploded ordnance, ordnance debris and chemical contamination from bombing tests conducted more than 70 years ago.

The U.S. Army Corps of Engineers is usually responsible for clearing unexploded ordnance from former military installations.

Immediately after the end of World War II, the U.S. Air Force announced the property was clear of all ordnance. But in the early 1950s, corps technicians visited the property to remove more unexploded ordnance, and noted that some inaccessible areas, swamps and marshes likely contained additional munitions.

Brunetti's father purchased 4,000 acres of the former bombing range in 1956. Until 2000, the Brunetti family operated the property as a ranch and said they had no knowledge of or experience with unexploded ordnance on the property.

In 2002, a ranch hand accidentally set off unexploded ordnance on the property. By that time, the northern portion of the former bombing range had been developed into two residential subdivisions and Orange County's Odyssey Middle School, which abutted the northern boundary of Brunetti's property.

In 2006, residents found additional ordnance in the ground. The corps returned in 2007 and again in 2011 to search for additional munitions and chemical contamination.

In 2009, they removed 14 tons of bomb debris and more than 400 live bombs and rockets from portions of the former bombing range north of the Brunetti property. In addition, they completed another extensive survey and removal project of the developed area in 2015 at a cost of \$10 million.

In 2013, Brunetti, through his real estate partnerships, entered into an agreement under the federal Comprehensive Environmental Response, Compensation and Liability Act to remove ordnance and chemical contamination from 1,400 acres planned for development.

He refused to allow corps technicians on the property to do the work. Instead, he hired Buffalo Restoration LLC of Madison, AL, to conduct the work.

The recent lawsuit was filed to recover the cost of hiring private contractors to do the work in a time frame consistent with development plans Orlando approved in early 2016.

Mockingbird Orlando's filing includes a summary of the property's use as a bombing range and prior assertions that it had been cleared—claims found to be false.

In the late 1940s and again in 1952, the corps conducted clearance activities on parts of the 10,500-acre Magnolia Ranch. The ranch was a large property the federal government leased for the bombing range during WW II. This work was completed just before Joseph Brunetti purchased parts

of the ranch in 1956.

Following the 1950s munitions clearance effort, the corps recommended that a 500-acre portion that included some of the Demonstration Range North be restricted to surface use only. That land, 15 miles from downtown Orlando at the time, was by 2011 the eastern portion of the Odyssey Middle School property, a wetland between Odyssey Middle School and Tivoli Gardens, in the southwestern portion of Tivoli Woods.

By 2015, following two intensive recovery and remediation efforts during the previous eight years, many pieces of ordnance comprising tons of material had been removed from that area.

As a result of its work in 2015, the corps estimated that over 69 acres of the Mockingbird property, 2.3 unexploded ordnance per acre could be found, while on another 9.4-acre portion, unexploded ordnance could be present at a density of 9.6 occurrences per acre.

The corps' 2015 final decision document presents a number of remediation plan options with completion times of two to six years. That document also stated that "it is impossible to guarantee that all munitions are removed—or could be removed—from the former Pinecastle Jeep Range. The (corps) never walks away from a FUDS (formerly used defense site); therefore, if munitions are found in the future, the (corps) will take appropriate action at that time."

Those assertions are the reason Brunetti prefers ordnance removal using a private contractor instead of allowing corps technicians to handle it.

The real estate market is ripe for Mockingbird Orlando's property bordered on the south by the State Road 528 near Lake Nona.

In remediation efforts outlined in the corps' 2015 final decision document, Buffalo Restoration claims that it will look for bombs throughout the site, on both uplands and wetlands, to a depth of 16 feet. The effort, if completed as stated, should unequivocally clear the property of any munitions.

Mockingbird Orlando filed suit in the Orlando Division of U.S. District Court for the Middle District of Florida asking for innocent party compensation for contamination cleanup under CERCLA.

A key point in the lawsuit's allegations is that the Brunetti family, through two generations of ownership, had no knowledge of Magnolia Ranch's lease to the U.S. Air Force during World War II because it was not recorded.

Magnolia Ranch's lawsuit in the early 1950s resulted in no property restrictions available through public records, notwithstanding the damage awards as a result of the lawsuit requiring U.S. government efforts to remove unexploded ordnance from the property.

The allegations also note that Joseph Brunetti was a New Jersey resident when he purchased the property, implying that he would have had no local knowledge in 1956 of the extent to which Magnolia Ranch had been used as a bombing range.

Magnolia Ranch sold the parcel of leased land to three different buyers in 1954 and Brunetti bought the property in June, 1956, from one of those subsequent owners. From 1956 until 2002, when tractor work on the property detonated unexploded ordnance, the family alleges no experience on the property to indicate unexploded ordnance was present.

As a result of surveys associated with Mockingbird Orlando's voluntary cleanup efforts initiated in 2013, the court filing alleges that the entire property may have ordnance on it, and the ordnance may be much deeper than the four-foot depth the corps characterized in its 2015 final decision document.

Mockingbird Orlando claims to have spent more than \$11.5 million since December, 2015, to remove the ordnance and its debris, and to meet the voluntary



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ORDNANCE
Continued on Page 16

Think tank study: Natural gas, wind most economic for generating power

By ROY LAUGHLIN

A comprehensive study conducted by the Energy Institute at the University of Texas at Austin showed that natural gas combined-cycle and wind power electricity generation are generally the least expensive sources of new electrical power.

In counties in some states, nuclear power is also favored economically.

Electricity generation with coal is always relatively expensive compared to average nationwide power generation costs.

The analysis was based on a geographically-resolved method to calculate the levelized cost of electricity, or LCOE, of new power plants.

The method characterizes the LCOE of a number of different electricity production processes including five coal combustion technologies, three dependent on natural gas as a fuel, nuclear, two solar photovoltaic methods and wind.

LCOE calculations were based on assumptions and estimates that a particular type of electricity generating plant costs to build and operate. LCOE use for comparing electricity generation costs is widely used, in spite of its limitations.

According to the report, currently used LCOE models are "spatially and temporally static." LCOE models used to date have not always accurately compared fuel costs, capacity factors and financing, which may differ across the U.S.

The existing strategies "do not anticipate real-time prices or market behaviors," according to the report, a limitation for future fuel costs of fossil fuel and nuclear plants.

In addition, LCOE does not factor in environmental externalities such as the availability of water for cooling or regulatory costs.

The report does not address all LCOE modeling weaknesses. It advances the use of LCOE by calculating construction and operation costs spatially and through time. It also factors in existing infrastructure such as natural gas pipelines, the occurrence of wind and other factors that influence new electricity generating plant cost at the county level.

The study's results were derived from an algorithm-based GIS incorporating computer-based calculations that can be run with or without certain assumptions used.

According to the report, the analysis is specifically formulated to show regional differences in the cost of electricity. The results are presented in a series of least-cost county maps. They consider only cost and do not characterize technology penetration or regional values. The output was calculated in 2015 dollars.

The study results were presented as a set of 14 case studies based on differing sets of assumptions.

The first in the report, for example, shows "minimum cost technology, not including externalities." It addresses the question: "What are the cheapest electricity generating plants to build in each U.S. county?"

By far, natural gas-powered combined-cycle plants cost the least in most counties. Wind power is second, and coal and nuclear power plants are a distant third and fourth, respectively.

This analysis is valuable because with each estimate of the lowest cost of technology, it also showed the calculated cost for electricity produced.

While nuclear and coal may be the lowest cost technology for Wisconsin and parts of Michigan, it doesn't necessarily produce the cheapest electricity based on LCOE calculations.

In Wisconsin, for example, even where coal plants might be cheaper, electricity cost is notably high, in the range of 12.2 to 14 cents per kilowatt hour, the nation's highest cost.

The report concludes that wind is the least cost option for the highest number of counties in the country.

Those counties are from Texas to Canada, east of the Rocky Mountains. Some counties in New York and along the spine of the Appalachian Mountains are also included.

Natural gas combined-cycle electricity generation is second. Nuclear is third. In terms of total area (rather than number of counties) in the U.S., natural gas combined-cycle is the LCOE winner.

It should be no surprise from this report that utilities across the nation are converting to natural gas at a rapid rate, in most cases, abandoning coal power plants in the transition.

The details of the model comparisons highlight key aspects of the influence of technology cost and externalities on LCOE nationwide. Utility-scale solar voltaic plants can, in a few cases where water is limited and sunlight is reliably present, be the lowest cost technology option.

Rooftop residential solar power generation is a least cost option where constraints for other technologies may exist.

And it's a competitively viable option—even if not the least expensive almost everywhere in the U.S.—according to an interpretation of the results by the Environmental Defense Fund.

Florida in particular has at least 15 counties where solar photovoltaic residen-

tial power is a minimum cost technology when externalities and availability zones are considered in the model.

But Florida is not a state with widespread reliance on residential solar power because of the monopoly franchise granted by state law to corporate electricity producers and distributors.

The different scenarios in this report illustrate starkly the sometimes wide divergence between what is technologically available, what is economically beneficial to electricity consumers, and what is currently the dominant electrical generating technology in each county.

The LCOE model is both detailed and sophisticated. Each scenario references one or more of the three primary assumptions expressed as an algorithm, and explained in the methods portion of the report.

Depending on which and how many of the three assumptions are used to estimate costs of generation facility construction and electricity cost, the results can vary widely and in a subtle way.

In some cases, comparing LCOE with and without the cost of handling waste, the costs of environmental compliance or other external costs makes substantial changes in the predicted overall cost of electrical power.

Officials with the Environmental Defense Fund who strongly endorsed this report noted that the model doesn't include consideration of subsidies received by coal and natural gas to underwrite exploration and extraction. Their absence in the calculations lowers the estimated cost of coal and natural gas to generate electricity.

It also does not include the federal production tax credits and investment tax credits for renewable generation technologies, nor any other subsidies that would lower renewable energy costs estimates, especially that of wind.


They also do not factor in public health costs or high level environmental damage risks associated with nuclear and coal power production. Even in spite of these limitations, coal power is not economically viable across most of the U.S.

The competing renewable energy technologies have become economically viable. Wind power, in particular, has the largest growth rate opportunities of any LCOE technology in the U.S.


Planners, consultants, municipally owned utility operators and energy technology advocates will find this report and the use of its LCOE tool to be valuable, especially because it can be updated in the future to accurately account for cost changes of materials and fuels.

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Public Notice of Pollution rule: One example of how desire for transparency shapes environmental law and policy

By JOHN POWELL, JD, PE, and JORGE CASPARY, PG

Environmental law and policy is rife with efforts to increase the sharing of information and public disclosure of environmental hazards.

In response to well-known environmental disasters such as Love Canal in Upstate New York, for example, the Comprehensive Environmental Response, Compensation and Liability Act was passed in 1980. CERCLA, in essence, places no affirmative obligation on regulated entities other than to provide notice of spills and releases.

The Emergency Planning and Community Right-to-Know Act is another example. Passed in 1986, EPCRA was borne out of incidents including the release of methyl isocyanate in Bhopal, India, that killed or seriously injured more than 2,000 people, and the subsequent release of a cloud of aldicarb oxime at a plant in Institute, West Virginia.

EPCRA requires reporting on the storage, use and release of hazardous substances to federal, state and local governments with the intent to increase the public's access to important information

that may affect their health.

California's Proposition 65, formally known as the Safe Drinking Water and Toxic Enforcement Act of 1986, is another example, requiring public disclosure of both toxic releases as well as toxic ingredients in consumer products.

Not surprisingly, most states have similar requirements.

Anyone involved in environmental compliance matters in Florida knows that among the many notification provisions, most applicants must publish notices of intent to issue permits in newspapers of general circulation.

This is required before agency authorization can be granted so that the public is aware of the pending action and has an opportunity to participate in the decision-making process by providing input or challenging the action through the formal petition for administrative hearing process.

This evolution demonstrates a growing trend away from the traditional command-and-control approach developed in the

1970s and towards more innovative and effective methods such as incentive-based and market-driven approaches.

Public education and information dissemination is one of these more modern approaches—arming the public with information while simultaneously allowing public pressure and market choices to more organically address a potential problem.

Building upon this decades-long momentum, on Sept. 26, 2016, Gov. Rick Scott directed the Florida Department of Environmental Protection to issue Rule 62ER16-1, Public Notice of Pollution.

Prior to the emergency rule, and depending on the type of release, notification by a responsible party to the DEP or State Watch Office was generally all that was required.

The new rule, however, added another layer, requiring notice to also be provided to local officials, broadcast television affiliates, newspapers of general circulation and potentially affected property owners within either 24 or 48 hours of the release

or spill.

The emergency rule was implemented after the public first learned that hundreds of millions of gallons of industrial wastewater had been released underground through a sinkhole in Central Florida—a release that occurred weeks earlier.

The emergency rule was intended to require prompt notification to the public regarding any incidents or discovery of pollution that could cause a threat to the air, surface waters or groundwater, and affect public health.

The emergency rule and its penalty for noncompliance provision quickly got the attention of a diverse group of regulated entities that struggled to understand exactly how to comply—as well as how it would be enforced.

Questions arose such as which media outlets to notify and what specifically to report; how to notify potentially impacted property owners in writing when some did not have email addresses on file, access to computers or smart phones; and when others rented their property or were absentee owners.

For utility field workers, questions concerned whether to walk up to a private residence and place a notice on the door in the middle of the night or, alternatively, to mail the notice even though impacts might be long gone by the time the notice arrived; and whether to wait hours or sometimes days for lab results to come back before being able to make the determination of who was impacted.

While intended to apply to only those spills and releases that were already reportable prior to the emergency rule, read strictly, nearly every spill and release would be subject to the new requirements, even those as small as a gallon.

In practice, facility personnel, field crews, the corporate environmental office and communications staff had to coordinate on nearly every spill regardless of its size or impact, and whether it occurred day, night or even during a storm.

Not surprisingly, and generally erring on the side of over-compliance, the number and variety of incidents reported by industry under the emergency rule was very high.

Although the rule was broad in its applicability, wastewater treatment facilities were particularly impacted since, by its very nature, it is a process susceptible to overflows and releases.

With hundreds of miles of underground piping subject to rust, decay and tree roots, manholes vulnerable to runoff, storms causing sudden power outages and flooding, lift stations that may or may not be backed up by emergency generators, and the pervasive unauthorized discharges by utility customers of clogging fats, rags, oil and grease, the probability of overflows from treatment plants is inescapably high.

The emergency rule also attracted the attention of local governments that are not only responsible for reporting their own releases, but would also be the recipients of notifications for spills in their jurisdiction for the first time.

In many cases, it was unclear to cities and counties why they were receiving the information, what it meant and what to do with it.

The media seemed less interested though, reporting on the first one or two spills, and then abandoning coverage to focus on more interesting stories.

Concurrent with the temporary Emergency Rule, the DEP issued a notice of intent to adopt Rule 62-4.161, Public Notice of Pollution. The proposed rule was intended to be the permanent codification of the emergency rule.

However, upon petition by several industry and utility groups, the proposed rule, and the emergency rule by default, was invalidated by the Florida Division of Administrative Hearings on Dec. 30, 2016.

After being in effect for 95 days and racking up hundreds of public notifications

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Florida Specifier

RULE
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Calendar

March

MAR. 4-5 – Exam: Backflow Prevention Recertification Exam, Bradenton, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 6-10 – Course: Asbestos: Contractor/Supervisor, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 6-10 – Course: Backflow Prevention Assembly Tester Training and Certification, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 6-7 – Exam: Backflow Prevention Recertification Exam, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 6-7 – Conference: Greenprints 2017, Atlanta, GA. Hosted by Southface and Georgia State University. Visit <http://www.greenprints.org>.

MAR. 7-8 – Course: Initial Training for Transfer Station Operators and Materials Recovery Facilities - 16 hour, Crestview, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 7-9 – Course: Initial Training for Landfill Operators and C&D Sites - 24 hour, Crestview, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 7 – Course: Refresher Training for Experienced Solid Waste Operators - 4 hour, Crestview, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 7 – Course: Initial Training for Spotters at Landfills, C&D Sites and Transfer Stations - 8 hour, Crestview, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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MAR. 7-8 – Course: Refresher Training for Experienced Solid Waste Operators - 16 hour, Crestview, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 7-9 – Course: Initial Training for Operators of Landfills and Waste Processing Facilities, Crestview, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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MAR. 12-15 – Conference: Southeast Recycling Conference & Tradeshow, Destin, FL. Hosted by the Southern Waste Information eXchange Inc. Call (850) 386-6280 or visit southeastrecyclingtradeshow.com.

MAR. 12-15 – Conference: Geotechnical Frontiers 2017, Orlando, FL. Organized by the Industrial Fabrics Association International's Geosynthetic Materials Association and the American Society of Civil Engineer's Geo-Institute. Call 1-800-486-3980 or visit geotechnicalfrontiers.com.

MAR. 13-17 – Course: Backflow Prevention Assembly Tester Training and Certification, Tallahassee, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 13-17 – 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.

MAR. 17 – Symposium: Restoration and Remediation in South Florida, North Miami, FL. Presented by the South Florida Association of Environmental Professionals. Visit www.sfaep.org.

MAR. 20-24 – Course: Water Class A Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 21-22 – Course: Initial Training for Transfer Station Operators and Materials Recovery Facilities - 16 hour, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 21 – Course: Refresher Training for Experienced Solid Waste Spotter - 4 hour, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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MAR. 22 – Course: Refresher Training for Experienced Solid Waste Operators - 4 hour, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 23 – Course: Refresher Training for Experienced Solid Waste Operators - 4 hour, Gainesville,

FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

MAR. 24-25 – Exam: Backflow Prevention Recertification Exam, Ft. Myers, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 25-29 – Conference: Environmental Information Association 2017 Annual Conference & Exposition, Orlando, FL. Visit <http://eia-usa.org>.

MAR. 27-30 – Conference: Annual Conference of the National Association of Environmental Professionals, Durham, NC. Call (856) 283-7816 or visit www.naep.org.

MAR. 28-30 – Course: Introduction to Electrical Maintenance, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 28-31 – Course: Water Class B Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

MAR. 29-30 – Workshop: FLADaPT Training Workshop, Royal Palm Beach, FL. Presented by LDCFL Inc. Contact Cathy Katsikis at (561) 512-9956 or visit www.ldcfl.com.

MAR. 31 – Meeting: Protecting Springsheds: Groundwater Conservation and Protection, Gainesville, FL. Presented by the Florida Section of the American Water Resources Association. Visit www.awraflorida.com

MAR. 31 – Seminar: 2017 Regional Stormwater Seminar, Atlanta, GA. Presented by the Southeast Stormwater Association. Call 866-367-7379 or visit www.seswa.org.

MAR. 31-APR. 8 – Course: Backflow Prevention

Assembly Tester Training and Certification, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

April

APR. 1 – Course: Refresher Training Course for Experienced Solid Waste Operators - 8 hour SPANISH ONLY, Plant City, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 3 – Course: –Wastewater Collection System Cleaning and Maintenance, Tavares, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 3-7 – Course: Backflow Prevention Assembly Tester Training and Certification, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 4 – Course: Introduction to Lift Station Maintenance, Tavares, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 4-6 – Course: Asbestos: Project Design, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 4-6 – Course: Process Control of Waste Treatment Plants, Miramar Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

APR. 5-6 – Course: Leachate and Landfill Gas Management System Design, Temple Terrace, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

Florida Specifier

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Backflow Prevention Courses

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Apr. 20-21, 2017 | Gainesville, FL

Backflow Prevention Assembly Tester Training & Certification

Apr. 3-7, 2017 | Lake Buena Vista, FL
Apr. 12-13, 2017 | Venice, FL
Apr. 21-29, 2017 | Ft. Myers, FL*
*(Two consecutive Fri. & Sat.)

Backflow Prevention Assembly Repair & Maintenance Training & Certification

Apr. 10-12, 2017 | Altamonte Springs, FL

Advanced Backflow Assembly Tester

Apr. 10-11, 2017 | Gainesville, FL

HAZWOPER Courses

24-Hour OSHA HAZWOPER Training Course

Apr. 19-21, 2017 | Tallahassee, FL

40-Hour OSHA HAZWOPER Training Course

Apr. 17-21, 2017 | Tallahassee, FL

Water/Wastewater Courses

Wastewater Collection System Cleaning & Maintenance

Apr. 3, 2017 | Tavares, FL

Introduction to Lift Station Maintenance

Apr. 4, 2017 | Tavares, FL

Process Control of Advanced Waste Treatment Plants

Apr. 4-6, 2017 | Miramar Beach, FL
May 10-12, 2017 | Marathon, FL

Pumping Systems

Operation & Maintenance
Apr. 5-6, 2017 | Tavares, FL

Water Distribution Systems Pipes & Valves

Apr. 7, 2017 | Tavares, FL

Asbestos Courses

Asbestos: Project Design

Apr. 4-6, 2017 | Gainesville, FL

Asbestos Refreshers

Apr. 17-19, 2017 | Gainesville, FL

Solid Waste Courses

Initial & Refresher Solid Waste Courses

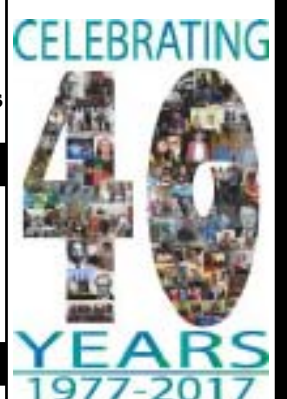
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Leachate & Landfill Gas Management System Design

Apr. 5-6, 2017 | Tampa, FL

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The *Florida Specifier* welcomes columns, articles and letters to the editor on any subject or issue pertinent to the environmental, regulatory and technical areas the newspaper covers. We reserve the right to edit all submissions for newspaper style and publish submissions on a space-available basis only. The opinions expressed on this page are those of the authors.

SESSION

From Page 1

agement and the beach management programs would create a new program with an \$8 million budget, a slight increase over last year's combined budget for the separate programs. The merger would result in a loss of two positions.

Another new program created through reorganization, a water restoration assistance program, would have a total budget of a little more than \$80 million. This program would depend on legislative approval of appropriations for Indian River Lagoon, St. Lucie and Caloosahatchee estuary restoration projects with a combined recommended spending level of \$60 million.

Total administrative costs for DEP are slated to drop by more than \$15 million, almost all of that through a zero budget for "additional contracted services appropriations for continued legal representation." Administrative staff would be reduced by six people.

Overall, DEP's reduced budget reflects

lower staffing levels—some of it through reorganization, some of it through closing vacant positions, some of it through staff cuts.

Proposed FWCC budget

The Florida Fish and Wildlife Conservation Commission, the second-largest of Florida's environmental agencies, is slated for a \$374.366 million budget, reflecting a \$5.87 million reduction compared to last year's budget.

Two of FWCC's programs face substantial cuts. The Executive Direction and Administrative Support Services office is slated for \$3.7 million less this year than last. The Division of Hunting and Game Management has a budget \$3.2 million less this year.

The divisions of Freshwater Fisheries Management and Marine Fisheries Management also face budget cuts of \$1.4 million and \$784,000, respectively.

The Fish and Wildlife Service Research Institute is slated for a \$1.5 million budget increase. The Division of Habitat and Spe-

cies Conservation, transferred to the commission from DEP as part of the reorganization, would get an increase almost as large: \$1.3 million. The Division of Law Enforcement is slated for almost \$400,000 more this year.

The governor's proposed FWCC budget plans no change in total number of positions, but the Executive Direction and Administrative Support Services office would be pared by nine people and the Law Enforcement Division by two positions to yield the 11-position increase for the Division of Habitat and Species Conservation.

Special programs

Environmental restoration is a key element of environmental spending, larger even than last year's spending on state springs. The Everglades are slated to get \$225 million, the largest single piece of the spending pie.

That breaks down as \$30 million for spending on the Everglades' water quality plan; \$140 million for Florida's share to complete the C-44 reservoir and continued spending for the C-43 reservoir. Combined, both reservoirs would store billions of gallons of water west of Lake Okeechobee.

The additional water storage capability would decrease the level of Lake Okeechobee releases sent down the Caloosahatchee River to the Gulf of Mexico. An additional \$53 million is slated for other Everglades restoration projects

Next year, \$61 million is in the governor's budget for emergency beach restoration work. An additional \$50 million is proposed to fully fund requested re-nourishment projects in DEP's Beach Management Funding Assistance Program. The program would be available to beaches throughout Florida.

Alternative water supply projects continue to receive favored funding and, in 2017-2018, would amount to \$100 million.

The prevention of Indian River Lagoon algal blooms, attributed to outflows from Lake Okeechobee, would receive \$60 million.

\$20 million of that is earmarked for Indian River Lagoon muck dredging, but the lion's share, \$40 million, would fund a 50/50 state matching grant program with local communities to encourage residents to abandon septic tanks and hook up to centralized wastewater treatment systems. It would also underwrite construction of new wastewater systems.

Florida's state parks are budgeted for an additional \$50 million; \$40 million would be spent for improvements across the park system, with \$4 million to comply with the Americans with Disabilities Act and \$6 million earmarked for maintenance and management projects.

Land acquisition is slated for \$55 million. \$30 million, the largest single amount, is for land acquisition for northern Everglades restoration work.

The Florida Communities Trust would receive \$10 million, as will Florida Forever. A special appropriation of \$5 million to buy property in the Florida Keys is also proposed.

DEP would have \$22.2 million in the coming year to provide grants to local governments and utilities to upgrade wastewater system capacity and reliability to prevent overflows. The grants would fund

up to 75 percent of the costs of assistance.

The cost-share proportion would be on a sliding scale, with smaller utilities eligible for greater state matching.

This program would address the wastewater system overflows in St. Petersburg during Tropical Storm Hermine and similar but smaller events along the Atlantic coast during Hurricane Matthew.

Waste management

The DEP's Division of Waste Management oversees dry-cleaning solvent contaminated site cleanup, the Petroleum Restoration Program, hazardous waste contaminated site cleanup, solid waste landfill closure, and solid waste management.

Gov. Scott's budget proposes to reduce spending in waste management by \$5.4 million to yield a total budget of \$133.75 million.

The PRP's total spending would decline by \$8 million. Cleanup of state-owned lands would decline by \$1 million. Hazardous waste contaminated site cleanups are slated to get an extra \$4 million and solid waste landfill closures would get an extra \$1 million.

The PRP is not slated to receive any special program funding such as occurred last year. The environmental programs, listed above, are not slated for any staff reductions in the governor's budget.

Lawmaker proposals

Restoration also dominates the state Legislature's discussions about environmental appropriations.

Last summer, Senate President Joe Negron, R-Stuart, proposed spending up to \$2.4 billion to build a reservoir south of Lake Okeechobee. In January, Sen. Rob Bradley, R-Fleming Island, sponsored a bill to buy 60,000 acres of land for a reservoir in the Everglades Agricultural Area for \$1.2 billion by December, 2018.

If the purchase negotiation fails, Bradley's bill would authorize returning to the 2009 agreement with U.S. Sugar Corp. to buy 100,000 acres of land. Funding would come through bonding \$100 million of the Land Acquisition Trust Fund.

The bill authorizes an average price of \$7,400 per acre to purchase land.

Senate Bill 112 regarding flood hazard mitigation would allocate up to \$50 million from the Land Acquisition Trust Fund for flood hazard risk reductions including land acquisition and green infrastructure to reduce the risk of flooding.

Bradley's Senate Bill 234 carves \$35 million from the Land Acquisition Trust Fund for the St. Johns River Water Management District to fund projects for restoration and enhancement in the Keystone Heights Lake region.


Senate Bill 230 regarding non-native animals would allocate \$300,000 annually for each of two years to support a pilot program for mitigating the impacts of invasive species on public lands. The FWCC in consultation with DEP would run the program.

The bill endorses "using strategically deployed hunting teams to target the invasive species and simultaneously collect information for research purposes."

House Bill 551 would authorize a \$20 million annual appropriation from the Land Acquisition Trust Fund for conversion from septic tanks to sewer systems in

SESSION
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Initial phase of Port St. Lucie water farm project gets underway

By **BLANCHE HARDY, PG**

City of Port St. Lucie officials are in the process of securing future drinking water supplies while preserving water quality in the St. Lucie River, St. Lucie River estuary and Indian River Lagoon.

The city plans to build a water farm with seven reservoirs on recently acquired land added to the city's McCarty Ranch Preserve. The preserve is located along the C-23 Canal, northeast of Lake Okeechobee and west of I-95 and the Florida's Turnpike in western Port St. Lucie.

"In addition to the reduced freshwater discharge, nutrient loading, turbidity and flooding, increased groundwater recharge and an added drinking water source, this project would also provide recreation space, ecotourism opportunities and habitat," said Port St. Lucie Mayor Greg Oravec.

SESSION

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the Indian River Lagoon and Caloosahatchee and St. Lucie estuaries

The bill would also require adoption of septic tank remediation plans in those areas where they are necessary to meet total maximum daily load targets.

The bill would also support septic tank repair, upgrade or replacement; drainfield modification; and the addition of effective nutrient-reducing features where connection to a sewer system is not an option.

It would also support muck dredging and stormwater improvements in the northern Indian River Lagoon.

Other proposed legislation

Legislation dealing more generally with water includes House Bill 285 that would require septic system inspections whenever property is sold.

House Bill 413 would establish the Water Oversight and Planning Board to oversee regional water supply and water quality planning, flood protection planning and environmental restoration.

The board would be comprised of two members appointed by the governor, several industry representatives and one representative from an environmental organization.

Senate Bill 532 would require DEP to "publish a list of contaminants that would present an immediate and substantial risk to public health, safety or welfare if released at specified quantities."

A party responsible for releasing these substances above the threshold would be required to notify the department within 24 hours with failure to comply subjecting them to a \$10,000 fine per day for civil penalties for each violation. DEP would then notify the public within 24 hours.

This proposed bill has the same title as the DEP emergency rule adopted late last year after the Mosaic Fertilizer sinkhole and St. Petersburg sewer system overflows.

An administrative law judge overturned the emergency rule due to lack of statutory authority to require responsible parties to place newspaper and electronic public notices of accidental discharges.

This bill's more limited scope appears to address criticisms that the DEP rule was too broad, and the judge's findings that DEP cannot require responsible parties to place notifications in newspapers and electronic media. (See related column on page 10.)

The Legislature considered both sides of the fracking debate in 2016 with some bills that would ban it statewide, and others that would allow it statewide and prevent local governments from banning it.

None of the bills passed, allowing several counties and cities to pass fracking bans that will remain in place regardless of legislative action in the future to expand fracking in the state.

This year, anti-fracking legislation is the subject of at least five bills: House Bills 35 and 451, and Senate Bills 98, 108 and 442. The bills focus on "extreme well stimulation," which would ban fracking of any kind, and other bills such as one from

The preserve is 3,100 acres of predominantly undeveloped natural land purchased in 2012 and incorporated into the city limits the following year.

In addition to fulfilling the city's plans to use the preserve's land for water storage and treatment, the property will serve the public as an environmentally conserved, passive recreation area.

The water storage and treatment project will convert 1,871 acres of currently fallow citrus grove into a shallow water storage and treatment reservoir. Upon completion, the project will divert more than 27,240 acre feet, or approximately 8.9 billion gallons, of nutrient-laden water from the C-23 Canal annually.

C-23 is among the largest contributors of freshwater to the St. Lucie River estuary. The other large contributors are Lake Okeechobee, the C-44 Basin, Ten Mile Creek, the C-24 Canal and land draining into the tidal basin.

as Sen. Dana Young, R-Tampa, that specifically bans acid fracking. At the time of this writing, no bills endorsing fracking had been filed.

Senate Bill 198 addresses vacancies on the Environmental Regulations Commission. It would establish a 90-day deadline for filling vacancies.

Further, it would require a super majority of the board to approve standards for air pollution, water quality standards, regulation of consumptive usage, hazardous substances release notification, ambient air quality standards, emission standards for stationary sources, surface water quality standards, groundwater classes, standards and exceptions, and drinking water classes, standards and exemptions.

Renewable energy would get a boost if Senate Bill 90 is passed to implement 2016's Amendment 4.

It would exempt renewable energy devices, primarily solar energy devices, from ad valorem property tax calculations for both residential and commercial properties. The proposed tax exemptions would continue until Dec. 31, 2037.

Senate Bill 456 would allow certain producers of renewable solar energy such as apartment complexes to sell power directly to their tenants without having to first sell it to a franchised public utility.

And finally, Senate Bill 162 would allow coastal communities of less than 100,000 residents to implement pilot programs testing regulations or bans of disposable plastic bags. The program could begin on or after Jan. 1, 2018 and continue until June 30, 2020.

Its intent is to allow municipalities to evaluate the impacts of the regulations or bans, and submit reports to a public hearing by Apr. 1, 2020. The proposed statute also requires DEP to receive a copy of the pilot project's report.

This broad overview describes the governor's proposed budget for environmental programs and specific legislation filed as of mid-February.

There are likely to be more twists and turns before the regular legislative session convenes on Mar. 7.

This year, environmental spending is in the news almost every day for two reasons. First, the spending levels being proposed are notably large this year as the Legislature again takes statutory knives to carve out funds from Amendment 1 spending.

The second reason is political theater dominated by a feud between Gov. Scott and House Speaker Corcoran, who opposes two of the governor's proposed economic incentives programs that he has called "corporate welfare."

Between them, incoming Senate President Negron is pushing for dramatically increased spending for a controversial reservoir in the Everglades Agricultural Area, which at this point Gov. Scott does not support and Corcoran supports at a lukewarm level.

The contestants are just now warming up for a legislative session that may bring as many surprises as the national election delivered.

Actions taken to reduce discharges from any of these sources are beneficial to the health of the estuary and Indian River Lagoon.

The city anticipates that the project will reduce freshwater discharges into the St. Lucie River by up to 21 percent. Current estimates indicate the project will remove approximately 90,000 pounds of nitrogen and better than 18,000 pounds of phosphorus annually from the water entering the North Fork of the river.

In the fall of 2016, the South Florida Water Management District assisted the city in initiating the project with an award of a water quality/quantity improvement/natural system restoration/storage grant of \$200,000 under the district's cooperative funding program.

The funding is assisting with the construction of the first phase of the project, Area #1, a 200-acre reservoir currently being designed and permitted.

Port St. Lucie is providing the balance of funding to complete Area #1 through their utility. Currently \$230,000 is allocated to design and permitting, and \$70,000 is budgeted as contingency.

The city anticipates completing construction of Area #1 by September, 2018.

City officials are pursuing additional funding for the development of Areas #2 through #6 from a variety of sources including the Florida Department of Environmental Protection and state Legislature.

They are also pursuing \$8 million from the SFWMD as an alternative water supply project.

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CASE petition opposing Turkey Point deep well injection denied

By **BLANCHE HARDY, PG**

A formal petition for a hearing to stop Florida Power and Light Co. from using deep well injection to dispose of industrial wastewater from its proposed expansion of the Turkey Point Nuclear Generating Station was denied.

The Citizens Allied for Safe Energy petition was determined by the U.S. Nuclear Regulatory Commission to have been filed "inexcusably late" in the permit process. The petition was filed on Nov. 29, 2016.

The proposed injection wells are part of FPL's plans to build two new nuclear reactors, Turkey Point 6 and Turkey Point

7, at the power plant in Homestead. The new reactors are anticipated to come online between 2027 and 2030.

The wells will be drilled into the deep aquifer boulder zone. According to the CASE filing, both contaminated wastewater generated by cleaning the reactors and liquid radioactive waste will be injected into the deep subsurface Floridan Aquifer.

The boulder zone is comprised of fractured dolomite, lies 2,000 - 3,400 feet below land surface and is characterized by an extremely high cavernous permeability.

It is the lower portion of the Floridan Aquifer and is overlain by a 500- to 1,000-foot-thick low permeability limestone and

dolomite confining bed. Water within the zone is saline.

Because the water is saline and the anomalous permeability of its cave system prevents the buildup of pressure in injection wells, the boulder zone has historically been used to dispose of treated wastewater generated in southeast Florida.

CASE's petition contained complaints they said were not addressed in NRC and U.S. Army Corps of Engineers reviews.

Among those issues were a possible connection between the boulder zone and the Atlantic Ocean east of Miami in the Straits of Florida, and a study by the University of Miami indicating material injected into the boulder zone may leak upward, possibly contaminating the Biscayne Aquifer's potable water supply.

The possibility of upward leakage from

the Floridan to the Biscayne was also mentioned by a FPL engineer early in 2016.

CASE also reported the findings of recently published U.S. Geological Survey studies indicating the presence of tectonic faults and karst collapse structures offshore in Biscayne Bay and the Atlantic continental shelf. Structures of this nature could provide preferential flow paths within and between the aquifers.

The NRC rejection of the CASE petition upholds the commission finding that "there are no environmental impacts to preclude issuing combined licenses to build and operate two reactors next to the existing Turkey Point nuclear power plant."

Having been rejected by NRC, CASE is planning to take their arguments to the Florida Legislature.

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FEDFILE From Page 2

The training, aimed at plant operators and technicians, is meant "to improve operations and management practices, promote system sustainability, and better protect public health and the environment."

The EPA does not provide the training and assistance directly, but the funding supports organizations that do.

The National Rural Water Association and the Rural Community Assistant Partnership will each receive \$4 million to help small public water systems comply with the Safe Drinking Water Act.

The University of North Carolina at Chapel Hill will receive \$1.8 million for training programs to improve the financial and managerial capabilities of small public water systems.

RCAP is slated to receive another \$1.2 million to improve operational performance at small publicly-owned wastewater systems and decentralized wastewater systems.

In addition, RCAP will receive \$1.7 million "to inform private drinking water well owners about protecting their drinking water supply and improving water quality."

The U.S. has about 157,000 public water systems that serve fewer than 10,000 people and 80 percent of that number serve fewer than 500 people.

These small systems, 97 percent of the nation's total, are challenged by economies of scale, lack of financial resources, aging infrastructure and high staff turnover that reduces their capability to reliably provide drinking water and wastewater services that meet increasingly stringent federal and state standards.

USF neighborhood redevelopment planning grant. The University of South Florida received \$200,000 from the EPA for collaboration with the University Area Community Development Corp.

The grant is intended to support the development of a strategic plan that deals with environmental pollution and redevelopment challenges in the university area community.

The project, slated to begin in March, will continue for two years.

The majority of the funding will be used to hire area residents to assist developing the community planning efforts. Their input will become a plan that the UACDC, headed by Executive Director Sarah Combs, will use to attract significant resources to support implementation.

A focus on brownfield or potential brownfield sites within the redevelopment area will be one focus of the planning.

Known or suspected brownfield sites are considered as major impediments to redevelopment, which includes areas on 20th Street north of Fletcher Street.

Redevelopment efforts include assessment of existing buildings, community engagement, economic market analysis, existing planning requirements and neighborhood criteria to help ensure that a mix of affordable housing and appropriate businesses receive tax breaks and other incentives that encourage their establishment.

The effort specifically intends to bring

in new residents and businesses without displacing existing residents.

USF and the UACDC lead the effort, joined by the Florida Brownfields Association, Mort Elementary School, the Environmental Protection Commission of Hillsborough County, the Florida Department of Health-Hillsborough County, the Hillsborough County Economic Development Office, the Hillsborough County City-County Planning Commission, Cardno, Vistra and BGW Associates.

Coverage for veterans poisoned at Camp Lejeune. During his last week in office, President Obama signed a rule that expanded the eligibility and scope of benefits provided to veterans and their family members stationed at Camp Lejeune, NC. Camp personnel may have been exposed to toxic chemicals in drinking water decades ago and may be experiencing detrimental health effects.

Obama's rule expanded service dates and added certain diseases and conditions to the list of those that meet presumptive requirements for service-related illness.

It applies to veterans of the U.S. Marine Corps, reservists and former National Guard members who served at Camp Lejeune for no less than 30 days (consecutive or nonconsecutive) between Aug. 1, 1953 and Dec. 31, 1987.

The wording of new rule expands that of the original rule published in 38 CFR 3.307 to include adult leukemia, aplastic anemia, bladder cancer, kidney cancer, liver cancer, multiple myeloma, non-Hodgkin's lymphoma and Parkinson's disease—"diseases associated with contaminants in the water supply at Camp Lejeune."

The Veterans Administration may also cover other conditions with "presumptive service connections" under certain conditions.

Adverse health effects have been linked to the presence of jet fuel and dry cleaning chemicals found in the early 1980s in water from several wells serving Camp Lejeune.

The wells were not closed until 1984-1985 after the source of the contaminants was linked to leaking jet fuel tanks and a dry-cleaning facility off base.

The Marine Corps noted in the 1990s that when the contamination was identified in the 1980s, there were no federal standards limiting the chemicals in the drinking water that are now believed to have caused harm.

In 2012, Congress passed a compensation law that extended free VA medical care to affected veterans and their family members who could document they were stationed at Camp Lejeune between Jan. 1, 1957 and Dec. 31, 1987.

Veterans and their advocates criticized these boundary dates as capricious. Eligibility dates, which the new rule rolled back to Aug. 1, 1953, is seen as significant for including more affected veterans.

Approximately 900,000 people were potentially exposed to Camp Lejeune's tainted drinking water. As many as 20,000 of those are veterans and family members that may now be living in Florida.

The new rule is expected to cost about \$2.2 billion over five years.

St. Johns County pilot aims to improve water quality in Lower St. Johns River

By ROY LAUGHLIN

St. Johns County currently meets its total maximum daily load targets for nitrogen and phosphorus releases to the St. Johns River.

But the county, which abuts the Jacksonville metropolitan area, is experiencing rapid population growth that has officials thinking about how to maintain water quality in the future.

"We're looking for an innovative way to meet future TMDL requirements," said Brian Kelsay, PE, a professional engineer with the county, in framing his description of their new crop alternative program, or CAP.

"We're asking farmers to switch from row crops to silviculture," he said.

The county will help pay for planting the trees and provide a yearly stipend over a 20-year period.

In return for the financial assistance, the county will get nitrogen and phosphorus runoff reduction credits of six and 3.5 pounds per acre, respectively, towards its TMDL water quality targets for the Lower St. Johns River.

The county is seeking CAP applications from landowners who have farmed their land within the past five years. They must offer to convert a minimum of 10 contiguous acres to pine tree silviculture, with a maximum of 100 acres for a period of 20 years.

The program does not intend to limit production of any specific row crop or reduce the number of sod farms in the area.

But the scoring process gives additional points to land "where soil infiltration is limited by high water tables or clay, and high runoff potential in close proximity to water bodies."

Because this is a voluntary program, the land selected for the pilot program will depend exclusively upon what is offered by the land owners.

CAP farmers can do the usual maintenance for pine tree silviculture including thinning and harvesting, even for the relatively short seven-year cycle as described in forestry best management practices.

If they harvest before the 20-year contract ends, they must replant.

Farmers may also use the land for "sylvopasture" a combination of forestry and pasture for cattle or other grazers. They cannot irrigate or fertilize the trees.

"We won't tell them how to manage their forest," said Kelsay. "They will work out the details."

Selected CAP farmers will develop a silviculture management program. The county forester from the Florida Forest Service may help prepare a plan for the CAP landowner at no charge.

The county will provide up to \$400 per acre of documented reimbursable expenses for land preparation and pine seedling planting. At the end of each year, the county will pay a \$150 per acre stipend.

By designating the payment as a stipend, farmers need not document expenses. They have only to make an annual application for it.

If farmers leave the program, they must pay back the county for the setup fees. If they harvest before the end of the 20-year contract, they must also pay replanting costs.

Farmers who withdraw from CAP do not have to repay annual stipend fees. The county intends to inspect the silviculture land at least once each year for contract compliance.

Kelsay said that the county funding is not enough to replace what most farmers could make from producing row crops. But the conversion stipend could be used on land that isn't producing very well.

"It's a steady, reliable income for 20 years," he said.

The silviculture harvest belongs to the

land owner participating in the program and there may be other advantages, such as lower tax rates.

The application process was intentionally kept simple, according to Kelsay, requiring completion of a two-page application. The first is a form supplied by St.



The county is implementing an innovative program to stay ahead of nutrient loading to local waterways.

Johns County and the second is a map showing the land being offered by its owner for the silviculture program.

Applications are being accepted through March 30, 2017, with planting to begin in 2018.

The county's pilot program is funded sufficiently to cover 500 acres of silviculture conversion in its first year.

The St. Johns River Water Management District is providing startup funds through a cooperative agreement with the county.

The county will make the annual stipend payments for the next 20 years.

By converting to pine silviculture, officials expect to reduce nutrient loading from croplands by four to 16 pounds of total nitrogen, and two to three pounds of total phosphorus per acre per year.

Most of St. Johns County's agricultural land is located in its southern half, where about 19,000 acres is currently used for row crop or sod cultivation.

The county's southwestern region make it a prime target for silviculture con-

version due to the likelihood of runoff and proximity to the St. Johns River and other waterbodies.

The pilot program stipulates the planting of only pine trees, conversion of land used only for row crops or sod production, few restrictions on silviculture practice and

PLAN

From Page 1

tending North Florida's future water supply.

But not everyone feels the supply plan is adequately comprehensive.

"The plan requires no reductions in currently excessive rates of groundwater extraction," said Robert Knight, PhD, director of the Howard T. Odum Florida Springs Institute. "The water management districts are still issuing new groundwater use permits—in spite of the plan."

Institute representatives offered several comments at the water supply plan adoption hearing held in Alachua in January. They noted that water supplies for both potable use and ecological needs have been reduced by increasing withdrawals from the Floridan Aquifer.

Institute calculations noted that historic average flows from Florida springs totaled 10.5 billion gallons per day. Knight said that, in 2010, spring flow averaged only 7.2 bgd, a 32 percent reduction.

The institute identified rivers and springs already adversely impacted by current permitted groundwater withdrawal volumes.

"The plan perpetuates all of the actions responsible for the current human-caused

a 20-year contract with minimal costs for withdrawing before its end.

Farmers' willingness to participate in the program will be the critical determinant of its success.

Program information is available at <http://www.sjcf.us/CAP/index.aspx>.

impairments so visible at the majority of our springs, in low lake levels, in declining river flows, and increased salinization of the Floridan Aquifer, the region's principle source of potable water," Knight said.

District officials point to a number of sources of water that, in combination, will help provide for future needs.

"The plan focuses on water sources other than groundwater to meet all future demands," said Monson. "In addition to conservation, the plan identifies over 160 million gallons a day of projects such as reclaimed water, stormwater and surface water to provide future supply and recharge for the aquifer."

In particular, she said that the water supply plan includes conservation efforts that could potentially reduce the projected 2035 water demand by as much 54 mgd.

"This represents 46 percent of the projected 117 mgd increase in demand over the 20-year planning horizon and demonstrates the districts' commitment to water conservation," Monson said. "The water conservation approach in this plan addresses all water use classes, including public supply, agriculture, commercial/industrial, power generation and recreational/aesthetic uses—not just public supply."

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Bay County reuse project will produce environmental, conservation benefits

By PRAKASH GANDHI

The Florida Department of Environmental Protection announced \$1 million in funding for a Bay County reuse project.

The North Bay Wastewater Reuse project includes the design, permitting and construction of about six miles of reuse line from the North Bay Wastewater Treatment Facility to Gulf Power's coal-powered Lansing Smith Electric Generating Plant for use in their cooling process.

Currently, the power plant is permitted to withdraw water from North Bay as its

source for cooling water.

After the plant's cooling process is complete, the water is discharged back to North Bay.

By making reclaimed water available for the plant's cooling process, less water will be withdrawn from North Bay and no wastewater will be discharged to local waterways.

Bay County officials said that when the project is complete, it will lead to improved water quality in the St. Andrew's Bay estuary.

The work will go a long way toward improving the county's environment and

as well as conserving water resources.

"It's a win-win for everyone involved, especially the environment," said Bill Dozier, Bay County Commission chair in a statement.

The Northwest Florida Water Management District is contributing funds to the project.

Wastewater reuse has been gathering steam in Florida for many years.

The state has been recognized as a national leader in reclaimed water with domestic wastewater facilities increasing their reuse capacity by about 465 percent

since 1986.

Currently, about 738 million gallons per day of reclaimed water is reused statewide.

Reclaimed water from public access reuse systems is used to irrigate about 362,000 homes, 530 golf courses, 1,000 parks and 360 schools.

Reusing 738 million gallons a day of reclaimed wastewater is estimated to have saved over 144 billion gallons of potable quality water and added more than 86 billion gallons back to available groundwater supplies.

RULE

From Page 10

across the state, the administrative law judge found that this new requirement for regulated entities to provide notice to the public was an "invalid exercise of delegated legislative authority."

While DEP asserted that they possessed the statutory authority under Section 403.061(7), Florida Statutes, since the requirement to report pollution was so integral to their ability to control pollution, the judge nevertheless found that there was no statute that specifically authorized DEP to require notification to entities other than the DEP for the release of a contaminant.

Although the judge did not find or directly speak to the issue, there appears to be consensus that DEP does possess the authority to make the notifications themselves.

As such, after the issuance of the final order, DEP immediately assumed the unenviable role of providing these public notifications.

The good news for regulated entities was that they no longer had the responsibility to provide the notifications to mayors, county commissioners, the media and potentially affected residents.

The bad news, perhaps, was that the information was now being collected and summarized by the State Watch Office and the DEP.

The ability to control the flow of information and ensure its accuracy was partially lost. Although not making the notification themselves, regulated entities still have to be prepared to respond to the community's questions and concerns.

Whether or not DEP continues to make the notifications on its own, or the Florida Legislature uses this year's session to explicitly provide the authority to require industry to do it, the desire to share information with the public is certainly a noble one.

Industry and government must continue to provide information to the public,

as unpleasant as it may sometimes be. Conversely, the public must understand that manufacturing products and providing essential services such as electricity and wastewater treatment to more than 20 million Floridians will never be a perfect process.

Transparency, which serves as the foundation for public participation as well as emergency preparedness, builds trust. However, integrating transparency and the public notification of pollution incidents in an efficient, effective and low cost manner is far from simple.

John Powell is a professional engineer, Florida Bar licensed attorney and general contractor specializing in environmental regulatory compliance, sustainability and facilities management related issues. Jorge Caspary is an engineer, professional geologist, associate with Littlejohn, Mann, and Associates, and vice president of WSource Group in Tallahassee.

ORDNANCE

From Page 8

cleanup requirements as well as Orlando's development requirements on the former bombing range.

The cleanup work is yet to be completed and the total cost is estimated to be \$30.5 million.

U.S. Department of Justice attorneys have 60 days from the Jan. 30 filing date to respond to the lawsuit. A hearing date had not been set as of the first week of February.

This environmental remediation effort is unusual both for the area involved and because potentially lethal ordnance is the subject of the removal. More than a thousand acres will be involved in Vista Park and Starwood.

It is also notable for its use of a private contractor, rather than corps technical staff, to complete the work.

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