Florida Specifier

Practical Information For Environmental Professionals

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Photo courtesy of Mosaic Fertilizer LLC

Mosaic Fertilizer used laser imaging, detection and ranging in a novel way to characterize the underground extent and characteristics of a sinkhole that opened below a gypstack at the company's New Wales plant. Here, the LiDAR unit is in a protective cage to keep it dry and protected from damage from the sinkhole's walls and floor. See story below.

Sinkhole grouting may begin this month at Mosaic's New Wales plant

By ROY LAUGHLIN

Late this fall, a massive sinkhole opened up under a gypstack waste pile carrying more than 200 million gallons of low pH, radioactive process wastewater into the Floridan Aquifer beneath Mosaic Fertilizer LLC's New Wales plant near Mulberry.

Significant new developments regarding the cleanup continue to occur. The Florida Department of Environmental Protection and Mosaic provide daily schedules of activities.

Mosaic recently released summary statements regarding the effects of the spill. Both Mosaic and DEP have taken water samples and, for months, have said results will be forthcoming.

But as of mid-November, neither has released any water analysis data.

The consent decree recently signed by Mosaic and DEP may facilitate the release of water analysis data obtained since early September.

In September, Mosaic said an estimated 215 million gallons of gypstack process wastewater was released through the sinkhole to the Floridan Aquifer. The company later said that the process water had descended into the Floridan to a depth of 800 feet.

The company initially reported that horizontal water flow through the aquifer was slow, giving a figure of 500 feet per month. At that rate, the company said, it might take several months for the Floridan's matrix flow to carry process water contamination beyond the company's property boundary.

As soon as it discovered the sinkhole, Mosaic began pumping water from the Floridan to the surface from its production wells in an attempt to recover the contaminated water.

Mosaic officials said that the pumping may have to continue for several years—until water analyses indicate no trace of contamination.

Details of Mosaic Fertilizer consent agreement
See Page 7

A map on the company's website showed multiple wells west of the gypstack where the sinkhole opened. But few wells were shown on the south and southwest sides of the property , the direction of expected aquifer flow under usual flow conditions.

So Mosaic, along with its consultants and contractors, developed a plan for drilling additional monitoring wells on the south and southwest side of the collapsed gypstack site.

In mid-October, Mosaic officials said that the bottom of the sinkhole was filled with gypsum "blocks" from the gypstack, based on LiDAR instrumentation lowered into the sinkhole.

At that time, the hole was reported to be dry and its bottom about 30 feet below ground level.

SINKHOLE
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Decades-old tri-state water war lawsuit underway

By BLANCHE HARDY, PG

The trial between Georgia and Florida for rights to the water flowing through the Apalachicola-Chattahoochee-Flint River Basin is underway in Portland, ME—despite the best efforts of U.S. Supreme Court-appointed Special Master Ralph Lancaster to settle the 27-year-old water war out of court.

Formal testimony began on Monday, Oct. 31.

The trial was initially scheduled to take place in Washington, DC. But the venue was moved to Portland because the DC District Court could not provide staffing for the proceedings. Lancaster's offices are in Portland.

Georgia has spent more than $40 million litigating the case that employed 70 lawyers at one point.

Florida has spent similar dollars, producing more than three million pages of case-related documents.

The trial is the result of Florida's October, 2013, request that the Supreme Court grant Florida the right to sue Georgia for an "equitable apportionment" of the water from the ACF basin.

State vs. state lawsuits can only be heard by the U.S. Supreme Court.

Attorneys from Florida and Georgia are anticipated to make arguments at least through the end of the year.

Once the attorneys have presented

TRI-STATE
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EPA partners with NAAEE on national environmental education programs

Staff report

The U.S. Environmental Protection Agency announced a new collaboration with the North American Association for Environmental Education to provide education and training opportunities throughout the country.

The new program is titled "ee360."

The agency will provide up to $10.8 million over five years to support the program, beginning in 2017.

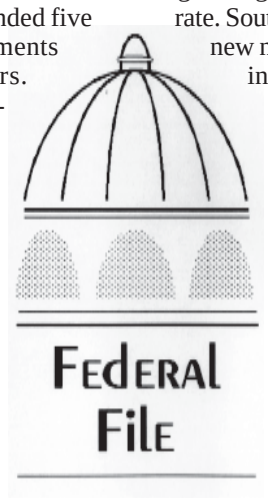
Partners include Antioch University, the Center for Diversity and the Environment, Earth Force, the NAAEE Affiliate Network, Project Learning Tree, Stanford University, the University of Oregon, the U.S. Fish and Wildlife Service, the U.S. Bureau of Land Management, the U.S. National Park Service, the National Oceanic and Atmospheric Administration and the U.S. Forest Service.

Partnership members will train teachers and educators to provide "high-quality environmental education in formal and non-formal education settings."

Program organizers anticipate training more than 4,400 educators in the first year. To accomplish that, the partnership will conduct leadership clinics, develop state certification programs, use technology such as webinars and online training, expand access to resources and teach the value of environmental education.

NAAEE is a national organization based in Washington, DC. It has a Florida Chapter in the NAAEE Affiliate Network.

Since 1992, the EPA has funded five cooperative education agreements each lasting about five years. Until this year, the primary collaborators have been colleges and universities.



GA Tech announces energy center. The Georgia Institute of Technology has plans to establish a new southeastern regional energy center that will operate out of its Strategic Energy Institute.

The center has not been named yet. That will occur in spring, 2017.

In its announcement, Tech officials noted that "federally funded research and development has not been connected to state and regional industrial development."

Georgia Tech's new energy institute's regional focus will train local talent and create appropriate technology for regional jobs, companies and industries.

Tech officials noted that the southeastern U.S. is in the process of developing a unique energy generation portfolio.

Natural gas generation in the Southeast is growing at about double the national rate. South Carolina is the site of the only new nuclear power plants being built in the country.

The Southeast is also leading the nation in deploying utility solar power and is "a global leader in industrial big data, posting the largest global concentration of corporate facilities that are aggregating, analyzing and remotely controlling major energy infrastructure."

The new center will produce technically rigorous fact-based policy studies and analyses that focus on status, trends and opportunities for southeastern energy industries.

GHG emissions continue to decline. The U.S.' greenhouse gas emissions from large stationary facilities declined again in 2015, according to a data summary just released by the EPA.

Nationwide, greenhouse gas emissions from about 8,000 large industrial facilities were 4.9 percent lower in 2015 than in 2014, and 8.2 percent lower than in 2011, the base year of President Obama's Climate Action Plan.

The EPA's annual report noted that power plants remain the largest greenhouse gas emission source in the country.

About 1,500 power plants emitted roughly two billion metric tons of carbon dioxide yearly, 30 percent of total 2015 U.S. greenhouse gas pollution.

Petroleum and natural gas systems reported 231 million metric tons of greenhouse gas emissions. This sector's 2015 emissions were 1.6 percent lower than 2014, but 4.1 percent higher than in 2011.

This category is the second highest stationary source of U.S. greenhouse gas emissions.

In recent years, the EPA established new rules for fracking wells that yield natural gas, implemented inspections, and required upgrades of gas storage and transmission systems. This may account for the small decline in greenhouse gas emissions in this sector.

Combined emissions from industrial and waste sectors accounted for 852 million metric tons of greenhouse gas emissions in 2015. This is 1.6 percent lower than emissions in 2014.

The iron and steel sector also reported large declines in greenhouse gas emissions.

The production of fluorinated organic chemicals was another sector showing large emission declines because these chemicals, largely used as refrigerants and in foaming products, are being phased out in favor of substitutes with lower global warming characteristics.

The data specifically apply to large stationary facilities such as power plants, oil refineries and heavy industries such as steel mills.

The data were collected through the EPA's Greenhouse Gas Reporting Program.

Data collected under this program is part of a larger effort to develop the Inventory of U.S. Greenhouse Gas Emissions and Sinks that will provide an estimate of the total greenhouse gas emissions by all sectors of the economy.

EPA will publish the 1990-2015 inventory in April, 2017.

Risk assessment of industrial organic chemicals. The EPA is expediting rule development to reduce exposure to five persistent, bioaccumulative and toxic chemicals.

The five chemicals, which may have several isomers, are decabromodiphenyl ethers, used as fire retardants in textiles, plastics and polyurethane foam; hexachlorobutadiene, used in synthetic rubber compounds and lubricants and as a solvent; pentachlorothiophenol, used to make rubber more pliable; Tris(4-isopropylphenyl) phosphate, used as a flame retardant in consumer products; and 2,4,6 tri-tert-butylphenol, used as a fuel, oil, gasoline or lubricant additive.

EPA is expediting the rulemaking process following last summer's passage of the Frank R. Lautenberg Chemical Safety for the 21st Century Act. The act reforms and updates the Toxic Substances Control Act.

One of the provisions of last summer's update was to direct the EPA to expedite action to reduce exposure risks of PBT chemicals.

The Lautenberg Act specifically directs the agency to expedite exposure-reducing regulatory actions for PBT chemicals, rather than spend more time evaluating them.

Under the new law, manufacturers had until Sept. 19 this year to request that the EPA add chemicals to its 2014 workplan for conducting risk evaluations, as an alternative to expedited action.

The EPA received two requests for risk assessments of chemicals used in fragrance

FEDFILE

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System failure forces GRU switch from coal to biomass

Staff report

A failure at its Deerhaven coal plant has prompted Gainesville Regional Utilities to switch to biomass as the city's main energy generation source.

The change was already being planned, but a mechanical failure that affected the emission control system at the utility's coal plant accelerated the move.

The biomass plant is operated by the Gainesville Renewable Energy Center under a 30-year contract with GRU.

Power generated by biomass is more expensive than other sources, so GRU has tried not to rely heavily on it.

Officials don't know yet how much the switch will cost the utility. GRU is committed to paying GREC $70 million a year to keep the plant poised to produce power when needed.

GRU serves roughly 93,000 customers in Gainesville and surrounding areas.

Levy County nuclear. Duke Energy received federal approval for major licenses to build two nuclear reactors in Levy County.

The Nuclear Regulatory Commission said it approved issuing two combined operating licenses for the project.

In 2013, Duke agreed to shelve plans to build the reactors. But the utility left open the possibility that it could pursue nuclear power in the future.

The agreement also left open the possibility that the utility would continue to seek the combined operating licenses.

Florida Forever. Florida agreed to buy the 11,027-acre Horn Spring property in Leon and Jefferson counties.

The purchase will help protect water resources, and provide public recreational and educational opportunities.

Jon Steverson, secretary of the Florida Department of Environmental Protection, said it's the largest Florida Forever acquisition since 2006.

The property is located within the Upper St. Marks River Corridor.

The southern portion of Horn Spring will be added to the existing Natural Bridge Battlefield Historic State Park and will be managed by the Florida Park Service.

The northern portion will be managed by the Northwest Florida Water Management District in coordination with Florida Fish and Wildlife Conservation Commission.

Asphalt cleanup. The cleanup of asphalt fragments and road base materials is underway at the Gulf Islands National Seashore Fort Pickens area.

The entire project is expected to take up to five years to complete.

Asphalt pieces ranging in size from large slabs to as small as a quarter of an inch in diameter and other road base materials will be removed.

The roadway debris has accumulated for more than 20 years following hurricanes and storms that destroyed and scattered portions of the park's asphalt roads.

Ag awards. Florida Commissioner of Agriculture Adam Putnam named Jones Potato Farm, Cherry Lake Tree Farm and Alliance Dairies as recipients of the 2016 Agricultural Environmental Leadership Award.

The award spotlights the innovative practices introduced by Florida growers and ranchers.

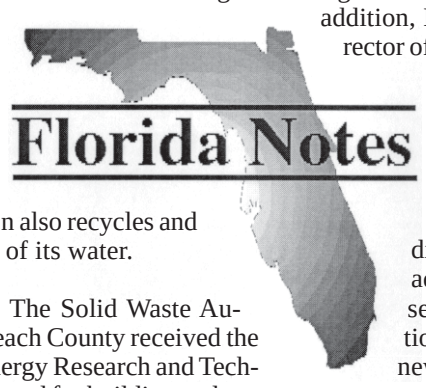
Individual farmers and ag operators undergo a selection process by an independent committee formed from major agricultural and environmental group representatives.

Wildlife habitat conservation, nutrient management and improvement of water quality are considered in the selection process.

At Jones Potato Farm in Southwest Florida, Alan Jones developed a hybrid irrigation system using both drip and pivot irrigation technologies, reducing overall water consumption by 50 percent and improving crop yields.

Cherry Lake Tree Farm in Central Florida developed innovative best management practices to decrease operator water usage and implement environmentally friendly pest control.

Alliance Dairies, a 24-hour dairy operation, produces around 18.5 million gallons of milk annually using other industry byproducts such as distillers' grains and citrus pulp as cattle feed. The operation also recycles and reuses 80 percent of its water.



WTE award. The Solid Waste Authority of Palm Beach County received the 2016 Waste-to-Energy Research and Technology Council Award for building and operating two waste-to-energy plants, including a newly opened 95-megawatt facility.

In late 2015, the authority opened the first new waste-to-energy facility in the U.S. in 20 years.

Nature Conservancy changes. Greg Knecht has been promoted to deputy state director of the Nature Conservancy in Florida. He spent nearly 20 years at the Florida Department of Environmental Protection, most recently in the Office of the Secretary as director of the Office of Ecosystem Projects.

Kristina Serbesoff-King was promoted to director of science and planning after being interim director of conservation. In addition, Marilyn Bauer is the new director of strategic communication and marketing after serving as director of marketing and government affairs at the Cultural Council of Palm Beach County.

Steve Coates is the new director of field initiatives. In addition, Heidi Albritton will serve as the director of operations and Rosemary Mann is the new director of development.

DEP promotion. The Florida Department of Environmental Protection named Ryan Matthews as deputy secretary for regulatory programs, responsible for air, water, and waste pollution programs.

Matthews replaces replaces Paula Cobb, who held the position since January, 2015. Matthews most recently served as the director of the department's Office of Water Policy.

$1.5 million for Central Florida springs improvements in St. Johns district

Staff report

Three Central Florida springs projects within the St. Johns River Water Management District will receive up to $1.5 million.

The funding is intended to support water quality protection and enhancement efforts in water district springsheds.

The city of Longwood's Island Lake Septic Tank Connection/Removal project will extend central sewer system service to eliminate 100 residential septic tanks in the Wekiva Springs springshed.

Connecting to sewer will reduce nutrient loadings by 3,600 pounds per year. The SJRWMD provided $865,000 towards the project's cost.

Marion County received $241,000 to retrofit stormwater ponds. The work will improve nitrogen retention in the ponds and reduce nitrogen loading to the Silver Springs watershed.

The project funds replacement piping and retention pond enlargement to increase storage capacity. When complete, the project will reduce nitrogen loading to the aquifer that feeds Silver Springs by approximately 300 pounds per year.

The third grant supports the Silver Springs Forest Hydrologic and Springs Restoration effort. Its goal is to restore and enhance groundwater recharge and surface water hydrology in the 4,900-acre Silver Springs Forest Conservation Area.

The project will reduce turbid water discharges to the Silver River that will reduce nutrient inputs by 13,000 pounds per year.

The project will also conserve up to five million gallons of water per day—water that could replenish the Floridan Aquifer and help restore Silver Springs flow.

These Central Florida projects were among 35 spring projects for which the state Legislature appropriated $56.6 million in the 2016-17 "Florida First" budget.

The funding will support projects to improve water quantity and quality at Florida's springs.

The 35 springs projects are supported by $33.1 million in state and local matching funds. DEP noted that this represents the highest annual funding ever provided to enhance and protect Florida's springs.

SRWMD springshed improvement. The Suwannee River Water Management District's Ichetucknee Springshed Water Quality Improvement Project was completed in October.

The project converted a portion of Lake City's wastewater treatment plant sprayfield to a treatment wetlands. The 120 acres of created wetlands are expected to retain up to 77,000 pounds of nutrients annually, preventing their release to the Ichetucknee River.

This reduction equals about 85 percent of nitrogen loading to the springshed, and approximately 20 percent of the Ichetucknee River's total nitrogen loading.

In addition, the wetlands will allow up to 1.6 million gallons a day of water to recharge the Upper Floridan Aquifer. About 500 mgd will then flow from the aquifer to the Ichetucknee River, providing about 25 percent of the additional water needed for the river to achieve its minimum flow level.

The Ichetucknee Springshed Water Quality Improvement Project was a collaborative project between SRWMD, the city of Lake City, Columbia County and the Florida Department of Environmental Protection.

Cost sharing included $3.9 million from the DEP, $805,715 from SRWMD, $200,000 from Lake City; and $100,000 from Columbia County. The funding was awarded in 2013-14.

That funding also provided about $1.5 million through DEP for the Middle Suwannee River project in Lafayette and Dixie counties.

That project constructed and modified water conveyance structures to re-flood Mallory Swamp.

The re-flooding will allow wetland hydration and groundwater recharge to increase Ichetucknee River flows through water releases from the Upper Floridan Aquifer.

The Middle Suwannee River project is also nearing completion.

Funding for nutrient reduction facility. DEP awarded the city of Tallahassee a $500,000 cost-sharing grant for construction of the $6 million Upper Lake Lafayette Nutrient Reduction Facility.

The project funded the enlargement and deepening of the Weems Road Stormwater Treatment Facility, an existing wet detention pond, and the addition of a chemical treatment system, the Upper Lake Lafayette Nutrient Reduction Facility.

The facility treats stormwater runoff from a 10,000-acre sub-watershed. The facility releases its treated water to Upper Lake Lafayette and from there it flows into the Ochlockonee-St. Marks Basin.

The project is complete and preliminary monitoring indicates lower nutrient loadings to Upper Lake Lafayette with expected additional reductions in nutrient loading in the future.

SJRWMD reduces water allocation for permit renewals. The St. Johns River Water Management District Governing Board recently approved two water permit renewals, but reduced the permitted allocations by almost 200 million gallons per year.

THE WATER WATCH

The Marion County city of Bellevue's consumptive use permit for its public water supply system will decrease from 1.266 million gallons a day to 1.022 mgd, a 19 percent allocation decrease over the 20-year permit renewal period.

District officials said that the reduction was related to the city's water conservation efforts as well as slower than expected population growth.

The city of Maitland's consumptive use permit renewal was also subject to allocation reductions to encourage conservation.

The 20-year permit renewal allows a 4.0 mgd allocation in the years 2016 through 2026 but falls to 3.7 mgd in years 2027 through 2036.

This is a 7.7 percent decrease in groundwater allocations during the second half of the 20-year permit interval. During that second half interval, conservation measures are expected to produce a 300,000 mgd reduction.

The reduction is expected to mitigate impacts to the Wekiva Basin's springs.

St. Andrews plant replacement. The Panama City Commission awarded a construction contract to Marshall Brothers Construction & Engineering Inc. to build a new wastewater treatment plant at its St. Andrews Wastewater Treatment Facility.

The project involves replacement of the existing plant on Michigan Avenue. The new system will be installed and in operation, followed by razing of the old facilities.

This is the largest public works project in Panama City history.

The city's new plant will increase its wastewater treatment capacity from the current 5 mgd to 7.5 mgd.

Panama City began planning its wastewater plant expansion five years ago, based on population growth expectations that would put its existing 30-year-old plant over capacity.

But the expected growth and demand for wastewater treatment has not materialized.

Justification for the plant upgrade and expansion are now linked to reducing nutrients released to the bays and estuaries adjacent to Panama City, reducing odor and meeting DEP's updated wastewater treatment standards.

The new wastewater treatment facility will cost $37 million.

A recent rate study suggested that to pay for the new plant, a 22 percent wastewater treatment rate increase will be necessary. The Panama City Commission voted to raise water and sewer rates by three percent per year over the next five years, the interval before the new plant becomes operational.

Based on the rate study, the first year of the replacement plant's operation may still require a seven percent or greater rate increase, but will nevertheless be much less burdensome than a one-time 22 percent increase over today's rates.

The city may also take other measures to reduce short-term hardships resulting from such a significant utility rate increase.

Gainesville plant electrical system upgrade. The Gainesville City Commission approved an invitation to bid on proposals to upgrade the electrical system at

WATCH

Continued on Page 5

Cleanup effort underway to resolve cooling canal issues at FPL Turkey Point nuclear facility

By BLANCHE HARDY, PG

The cleanup of contaminants discharged from Florida Power and Light Co.'s Turkey Point Nuclear Generating Station cooling canals is underway.

The utility is acting in compliance with a Florida Department of Environmental Protection consent order entered into on June 20, 2016, and a consent agreement with the Miami-Dade County Division of Environmental Resources Management amended in August, 2016.

"FPL has begun implementing its long-term plan to draw the hypersaline water west of the cooling canals back to the canal system's boundaries, as well as restoring areas to the east of the cooling canals designed to protect the quality of surface water in Biscayne Bay," reported Peter Robbins, FPL's nuclear communications manager.

In addition to its consent agreements with DEP and Miami-Dade DERM, FPL is being sued for noncompliance with the Clean Water Act by the Southern Alliance for Clean Energy and the Tropical Audubon Society.

SACE is a nonprofit, nonpartisan energy watchdog group based in the Southeast U.S. advocating for energy reform with the goal of protecting and preserving natural resources.

Within a few weeks of the start of FPL's cleanup activities, SACE and Tropical Audubon filed an amended complaint adding Friends of the Everglades to the lawsuit and emphasizing the nature of the limestone and flow regimes within the aquifer underlying the area of the plant and Biscayne Bay.

SACE claims that the models FPL used to develop its remedial action plan are inaccurate.

"FPL's proposed remediation plan is costly and won't stop the continued pollution of Biscayne Bay," claims SACE consultant Laura Reynolds on the alliance's online blog.

To back up this opinion, the group referred to the publication "Detection, Mapping, and Characterization of Groundwater Discharges to Biscayne Bay," SFWMD Contract C-15870, Expanded Final Report by Atlantic Oceanographic and Meteorological Laboratory, containing data on potential local springs that was collected between 2003 and 2005.

Reynolds points to the report's conclusion that "numerous natural underground connections exist" beyond those considered in the consent order and consent agreement.

SACE feels the springs may be an underevaluated factor when considering releases from the cooling canals.

FPL will not comment on current litigation.

However, Robbins said that they are "in compliance with existing administrative orders issued by the Florida Department of Environmental Protection and the Miami-Dade County Department of Environmental Resources Management" and noted that the two regulatory agencies have authority over matters relating to the cooling canals.

"Our detailed plan, which we are already implementing, is the result of a months-long process," he said. "It was developed in consultation with regulatory agencies and independent experts in hydrology, environmental conservation and wildlife protection.

"It is based on data from airborne electromagnetic surveys conducted by helicopter that enabled scientists from FPL and other organizations to more accurately identify the location of hypersaline groundwater and to develop plans for its removal.

The power company also collected data from dozens of monitoring stations and facilitated an analysis of technical data by independent experts, he added.

FPL is currently removing approximately 15 million gallons a day of hypersaline groundwater from underneath the cooling canal system and conveying it underground to a zone of deep seated hypersaline waters."

The utility also continues to augment the water in the canals with 14 million gallons of brackish water a day to achieve a blended product that balances the salt levels in the canals with the salt levels in Biscayne Bay.

WATCH

From Page 4

its 42-year-old Murphree Water Treatment Plant.

Gainesville Regional Utilities wants to upgrade the treatment plant's electrical system including new conductors and wiring to major equipment, upgraded electrical equipment, a new electrical building and a new plant generator.

In addition, the upgrade plan addresses infrastructure improvements at the plant's entrance and its security facility as well as stormwater management system improvements.

GRU conducted a mandatory pre-bid conference on Nov. 17. Bids are due on Dec. 14, 2016.

The utility expects to award the project in January, 2017, and to begin construction in February, 2017. They hope to have the upgrades completed in the spring of 2019.

Winter Haven water quality grant. DEP awarded the city of Winter Haven a $750,000 grant to help improve water quality in Lake Conine.

The grant will fund restoration of a ditched and drained wetland along the south side of Lake Conine. The restored wetland will sequester nutrients from stormwater runoff, and retain trash and debris before the water flows into Lake Conine.

Periodically, the city will clean out the marsh—a much simpler process than dredging or cleaning Lake Conine.

Future phases of the restored wetland project include recreational amenities. The recent DEP grant addresses only wetland restoration. Recreational improvements will be funded separately.

The Lake Conine project was one of three total maximum daily load water quality restoration grants that DEP recently awarded.

Monitors installed in Upper St. Johns River Basin. St. Johns River Water Management District staff recently completed the installation of four water quality monitors in the St. Johns River headwaters.

The new monitors are in place at intervals from Highway 50, west of Titusville, to a point south of Lake Hell'n Blazes.

The water quality sensors measure conductivity, pH, dissolved oxygen and temperature.

The data collected will provide insight into how concentrations of elements such as carbon and dissolved oxygen change as they flow downstream from the extensive marsh complex west of Palm Bay and Sebastian, the headwaters of the St. Johns River.

The new monitors are automated. They use the SJRWMD's telemetry network to continuously stream data to the district's headquarters in Palatka.

The data will be publicly available online, beginning in fall of 2016.

Florida already operates the most extensive surface water quality monitoring network in the world, and it just became a little more extensive.

Georgia Environmental Protection Division passes new coal ash containment regulations

By ROY LAUGHLIN

In late October, the Georgia Department of Natural Resources' Environmental Protection Division amended the state's disposal regulations for coal ash, more formally known as coal combustion residuals.

The amended rule primarily affects the state's coal-burning electricity generators. The regulations are intended to provide long-term protection to groundwater and surface water, and to reduce environmental exposure to the toxic components in fly ash.

The new rule maintains a fundamental benefit to CCR producers. CCR is regulated as a solid waste—rather than a hazardous waste—that can be disposed of in permitted municipal solid waste landfills.

Amendments addressing CCR disposal in Georgia's broader Municipal Solid Waste Landfill rule include nine added or amended provisions.

In broad overview, one amended provision extends the definition of CCR and establishes other definitions needed to implement the new regulations.

Site operators will be subject to new permit modification requirements.

CCR unit siting criteria have been modified so that CCR units are now subject to Georgia's rules for Solid Waste Management. CCR units are typically CCR storage facilities adjacent to power plants.

Another amended provision requires MSWLs that have accepted or will accept CCR to submit a management plan, and "clarifies that all CCR units are required to follow requirements found in 391-3-4.10," which is part of the amended Municipal Solid Waste Landfill rule.

Going forward, whether CCR is stored in impoundments near a power plant or moved to a MSWL, the state's new CCR provisions apply to them.

Provision 10 of the amended rule describes operational implementation details.

It adds specific and detailed CCR location restrictions, design criteria, groundwater monitoring, permitting, closure and post-closure requirements, recordkeeping, notification, financial assurance and variances for CCR landfills and surface impoundments.

Notably, it requires that landfills be lined, biannual monitoring be done and that the landfills not be sited where leakage to groundwater or overflow to surface water is likely.

MSWLs and commercial industrial landfills that accept CCR have new requirements for groundwater and impoundment monitoring, and additional new constituents are subject to monitoring.

An amended provision includes a list of maximum contaminant levels for contaminants found in impoundment ponds.

The following metals have MCLs under the amended rule: Arsenic, 0.05 g/l; barium, 1.0 g/l; cadmium, 0.01 g/l; lead, 0.05 g/l; and mercury, 0.002 g/l.

In addition to these five metals, the contaminant monitoring list in the amended rule includes additional elements and organic compounds.

Two separate amended provisions clarify CCR unit closure requirements and post-closure criteria, and extend the requirements to all CCR units in Georgia.

The amended provision makes CCR unit closure and post-closure subject to the provisions for MSWL closure and subject to provisions affecting landfills that have accepted CCR.

Finally, Georgia's amended provision includes legislative requirements that MSWL owners or operators notify local governments of a release likely to endanger human health.

MSWLs must annually report the volume of CCR disposed of. CCR disposal is also subject to a disposal surcharge, which is currently $0.75 per ton.

Georgia Power, a subsidiary of the Southern Company, is Georgia's dominant electricity generator and is the company most affected by Georgia's new CCR regulations.

It generated 2.4 million tons of coal ash in 2015 alone.

The company's total of 186 million tons of coal ash is distributed among 29 impoundments. The ponds cover an area of about 3.6 square miles.

Georgia Power plans to close all of the impoundments within the next three years to meet existing federal rules that require lined impoundments, periodic inspection and placement away from surface and groundwater, sinkholes and flood plains.

Twelve of its impoundments will be capped and closed in place. The remaining 17 will be excavated and the coal ash will be moved to an MSWL or will be recycled into concrete and cement block.

Georgia Power has analyzed water samples from all 29 impoundments. It has also placed 236 monitoring wells for sampling groundwater and is working toward a target of 500 sampling wells.

In the future, the company said it will make monitoring results available to the public.

So far, monitoring results show that six of the 29 CCR impoundments have contaminated groundwater.

About one third of the wells at Plant McDonough near Smyrna have higher than background levels of arsenic, beryllium and other metals associated with coal ash.

In two wells, the arsenic concentration was 0.0241 parts per million, twice the federal drinking water standard.

Georgia Power excavated one of four impoundments in an attempt to reduce groundwater contamination and has used engineering techniques to prevent future leaks from the remaining three impoundments at the site.

At Plant McManus near Brunswick, two of nine wells along the Turtle River had arsenic levels of 0.213 ppm.

Plant Hammond in Rome had arsenic levels at 30 times the federal drinking water standards. Three of its impoundments adjacent to the Coosa River will be excavated while the fourth will be capped.

Georgia Power officials said that groundwater identified at the three sites above has not spread to adjoining properties.

The power company is already on a trajectory towards sharply decreasing its reliance on coal at its fossil fuel plants. They have decommissioned at least two of them.

Almost every one of the remaining plants is at least partially converting to natural gas.

As Georgia Power terminates the use of coal to power its plants, much less coal ash will be generated and sent to landfills.

Georgia is the final southeastern state to draft rules regulating CCR storage and disposal within its boundaries.

Although the new CCR provisions are stricter than federal standards, some environmental advocates would still like to see more frequent groundwater sampling and analysis.

They would also like CCR units already closed in place to be excavated and the CCR moved to lined storage elsewhere.

North of the border

Fort Pierce receives stormwater grant

Staff report

The Florida Department of Environmental Protection provided more than $800,000 in grants for the Veterans Memorial Park stormwater improvement project in Fort Pierce to treat stormwater runoff before it flows into the Indian River Lagoon.

The project was funded through the state's total maximum daily load water-quality improvement grant program, and a U.S. Environmental Protection Agency water quality grant.

The newly redesigned park captures and treats stormwater runoff from a 44-acre drainage basin that previously released untreated water into the Indian River Lagoon.

Stormwater system improvements include pervious sidewalks and parking areas that allow water to filter through layers of rock and sand to cut down on runoff, as well as a settlement pond designed to remove pollutants and aid in the treatment of organics and nitrogen.

The city of Fort Pierce recently celebrated the grand reopening of the park, which will improve water quality in the IRL by an anticipated reduction of 116 pounds of nitrogen and 26 pounds of phosphorous per year.

To further improve the lagoon's water quality, the department is identifying additional wastewater and stormwater projects that would reduce the amount of nutrients entering the lagoon, and dredge projects that would remove muck from the bottom of the lagoon, which also feeds algal blooms.

Solar power rooftop system to power Fort Myers beverage distribution warehouse

By PRAKASH GANDHI

Solar power is taking a big step forward in Florida. A Tampa company, Solar Energy Management, is installing what it said will be the state's largest integrated solar power roof system in Fort Myers.

The solar panel system capable of generating 1.1 million watts of power was installed on top of an expansive roof near one of the busiest interchanges in Lee County, off State Road 82, west of Interstate 75.

The solar panels are going in up above a 230,000-square-foot distribution warehouse owned by J.J. Taylor Distributing Florida Inc., a leading beer distributor in the state.

Scott McIntyre, CEO of Solar Energy Management, said the solar system will reduce almost 75 percent of the building's energy needs.

"It's a totally unique system" he said. "We are making solar power affordable. We're going to be cooling the (plant) with the sun."

The system is comprised of 3,333 Canadian Solar 330-watt solar panels and 36 SMA tripower inverters. Water tight fasteners have been installed, welded to the thermoplastic roof. Rails attached to the fasteners will hold the solar panels in place.

It is projected to take about six years to recoup all of the project costs. In all, the energy savings is anticipated to be over 70 percent, McIntyre said.

McIntyre said Solar Energy Management is committed to the triple bottom line that it calls "people, profit and planet." The company offers solar solutions for solar power, solar energy, energy efficiency and solar hot water.

The company has more than 30 years of construction and energy efficiency experience.

J.J. Taylor already uses natural gas to fuel their delivery trucks, a move that saved the company money when oil prices spiked.

Company officials said they have been looking at natural gas and solar for a long time. The power bill would be $250,000 annually without solar, not counting any utility rate increases in the future.

Despite being known as the "Sunshine State," Florida has long lagged behind other states in adopting solar power.

The state ranks third in the nation for rooftop solar potential, according to the Solar Energy Industries Association, but ranks only 14th for cumulative solar capacity installed.

Florida has historically taken less advantage of solar energy than cooler, cloudier states such as New York, New Jersey and Pennsylvania.

But that's finally starting to change.

In February, Florida Power & Light Co. broke ground on three new plants that it calls solar energy centers: Babcock Ranch, Citrus and Manatee.

They are expected to triple FPL's solar power capacity.

Now under construction in Southwest Florida, the town of Babcock Ranch will be a sustainable, health-focused community, primarily powered by the sun.

The solar plant there is under construction on 440 acres.

The Citrus plant is being built on 841 acres in DeSoto County, while the Manatee plant will have more than 338,000 solar panels installed over 762 acres.

Applications available for conservation program

Staff report

The U.S. Department of Agriculture's Natural Resources Conservation Service is accepting applications for enrollment in its Conservation Stewardship Program, the nation's largest conservation program.

Applications are available in local service centers.

NRCS has made several updates to the program this year to help producers better evaluate their conservation options and the benefits to their operations and natural resources.

New methods and software for evaluating applications will help producers see up front why they are or are not meeting stewardship thresholds, and allow them to pick practices and enhancements that work for their conservation objectives.

These new tools also allow producers to see potential payment scenarios for conservation early in the process.

Sign-up runs through Feb. 3, 2017.

People interested in the opportunities the updated CSP offers can find information at http://www.nrcs.usda.gov/csp.

Since 2009, USDA has invested more than $29 billion to help producers make conservation improvements, boosting soil and air quality, cleaning and conserving water, and enhancing wildlife habitat.

Mosaic signs DEP consent agreement

By ROY LAUGHLIN

In late October, Mosaic Fertilizer negotiated a consent decree with the Florida Department of Environmental Protection.

The agreement establishes a list of corrective actions that the company must undertake following the release of gypstack process wastewater through a sinkhole and into groundwater at the company's New Wales plant in Polk County.

To comply with the decree, Mosaic will conduct a corrective action and grouting plan to permanently seal the sinkhole and ensure long-term effectiveness; recover contaminated groundwater from the Floridan Aquifer to prevent its migration from the site; install a standby recovery well; conduct an enhanced on-site monitoring program to verify the effectiveness of recovery well operations including installation of additional monitoring wells; implement a comprehensive off-site monitoring program to continue through at least December, 2018, to ensure residents around the New Wales facility have safe drinking water from private wells; and conduct hydrogeologic technical site investigations at the New Wales plant.

Mosaic has between 30 and 150 days to comply with most of the correction actions outlined in the decree.

Grouting operations will take as long as needed and the company will continue to test groundwater and drinking water off site at least until the grouting operations to seal the sink hole are completed.

A substantial number of the corrective actions were already in progress by the time Mosaic and DEP signed the decree.

The agreement acknowledges that Mosaic "neither admits nor denies" DEP's findings outlined in the consent decree.

Under the agreement, Mosaic will pay the department $177,000 "for costs and expenses incurred by the department during the investigation of this matter and the preparation and tracking of this order. The department acknowledges and confirms that the $177,000 shall not be deemed to be a civil penalty."

Mosaic will provide at least a $40 million financial assurance bond for these on-site corrections, off-site monitoring and any potential off-site rehabilitation.

If escalating costs warrant, financial assurance requirements may increase.

The consent decree will become binding if it is not challenged so that it becomes subject to an administrative hearing.

As of Nov 11, no challenges to the agreement were recorded or published.

USF survey shows environmental issues still among top concerns for Floridians

By PRAKASH GANDHI

Floridians are deeply concerned about the environment, according to the results of a survey recently released by the University of South Florida in Tampa.

The 2016 Sunshine State Survey listed the environment and the economy as the top two concerns of Floridians as they headed into election day.

While the results may not be a big shock to people who make Florida their home, the results highlight how strongly the state's residents feel about the environment in which they live, said Susan MacManus, PhD, USF professor of political science who conducted the survey.

"This survey verifies what we already know—that the environment is a big issue to the state's residents," MacManus said. "A lot of people move to the state because of the beaches and the nice environment and they want that protected. This is a state where the environment is always more of a concern than in other places."

The survey of 1,248 Florida residents from Sept. 1 to Sept. 19 was done using live telephone interviews.

Water-related problems were the top environmental concern of 34 percent of those surveyed, with the highest level of concern from residents in the Palm Beach and Naples areas—those hardest hit by algae outbreaks earlier this year.

"It is not surprising that water is a big issue," MacManus said. "We have the Everglades, which is a treasure of the state, and we have wonderful beaches and springs. Water quality and water resources are very important to residents."

Another 20 percent cited the loss of natural lands for wildlife and 18 percent, including a majority of those surveyed in the Miami-Dade and Fort Lauderdale regions, said that climate change is the greatest economic peril the state faces.

Citation rates for climate change and the loss of natural lands for wildlife increased more than any other concerns since last year's survey.

The state's handling of sinkholes was considered the single biggest environmental problem facing Florida today. Most Floridians rate the state's performance as fair or poor in that area.

Residents are most critical in the Tampa and Miami areas.

"It is certainly true that people love Florida because of the environment and they are certainly saying they want to make sure the environment is taken care of," MacManus said. "It is rare that a public official gets up and says something negative about the environment."

MacManus said the fact that the economy was another big concern should not come as a surprise to anyone.

The economy and the environment are closely linked and businesses recognize that being good stewards of the environment is good for business, she said.

"Ecotourism has come out of nowhere and become a big part of the economy," she said.

The survey results are the first in a series of reports to be released by USF meant to help guide state and local leaders on issues of relevance to Floridians.

"This is an educational service to the people of Florida and it is a good guide for business and government leaders," MacManus said.

"We see the survey as having a variety of purposes and providing good, solid data to people that make decisions."

IRL living shoreline projects offer alternative to seawall, bulkhead structures

By BLANCHE HARDY, PG

The Florida Department of Environmental Protection awarded more than $550,000 in funding for living shoreline projects.

The work, to be handled by the city of Titusville and Bethune-Cookman University, is aimed at protecting the health of the Indian River Lagoon.

Living shorelines are an alternate strategy for preventing coastal erosion, creating habitat, and preserving human and ecological communities in the face of advancing sea level rise.

Living shoreline development is being guided by the National Oceanic and Atmospheric Administration's Office of Habitat Conservation and promoted in Florida by the U.S. Fish and Wildlife Service.

Historically, shorelines have been stabilized by hardened structures such as bulkheads or concrete seawalls.

Over time hardened structures can function in opposition to their intended function by increasing—rather than slowing—the rate of coastal erosion.

The structures can eliminate the ability of the shoreline to preserve its geometry by natural processes and destroy habitat for estuarine species.

NOAA developed the concept of living shorelines as a means of implementing a more natural bank stabilization technique using plants, sand and the limited use of rock to provide shoreline protection and maintain valuable habitat.

"Investing in natural projects like these is important to our ongoing efforts to restore the Indian River Lagoon," said Trina Vielhauer, director of the Florida Department of Environmental Protection's Division of Water Restoration Assistance.

"Combined with area stormwater improvements, sewer rehabilitation and low-impact design improvements, these living shoreline projects will help to significantly improve the water quality of the Indian River Lagoon system," she said.

The city of Titusville's $60,000 project will establish plantings in the city's St. Johns Basin and Royal Oak stormwater wet detention ponds.

The newly installed vegetation will serve as a buffer between upland landscapes and waterbodies, absorbing nutrients originating from fertilizers, pet waste and vegetative debris carried by stormwater runoff.

The city will also provide educational exhibits and monitor the success of the plantings.

Bethune-Cookman University was awarded a $494,694 grant. The university's project will transform existing turfgrass shorelines and retention ponds into living shorelines by installing plants that are both native to Florida and better suited for filtering nutrients.

Bethune-Cookman will also develop educational exhibits and provide workshops highlighting the importance of reducing nonpoint source pollution along the Indian River Lagoon system's Mosquito Lagoon.

Funding for both living shoreline projects will be allocated from Section 319 Nonpoint Source Management Section grants.

One concept key to a living shoreline retrofit is to create a natural ecosystem capable of absorbing wave energy without causing erosion.

The shoreline typically extends from the upper bank of the property to below the water level and commonly includes a variety of plants, including wetland plants, submerged vegetation and plants that are rooted below water level but grow above the water and help absorb wave energy.

In addition to plants, the shoreline may include structural elements such as oyster shell reefs, coir fiber logs, sand fill and stone riprap or comparable habitat compatible materials.

NRDC report:

Up to 18 million Americans may face lead exposure in drinking water

By ROY LAUGHLIN

In a recent report, the Natural Resources Defense Council estimated that as many as 18 million Americans may be at risk of lead exposure in drinking water due to the same circumstances that caused lead exposure in Flint, MI.

There, pipes carrying water from the meter into the home, many in place for longer than half a century, were the primary source of the contaminant.

The lead exposure event, however, was attributed to the failure of its drinking water utility to add anti-corrosion treatment chemicals to the water supply when its source was changed and to follow other established practices mandated under the Lead and Copper Rule in the federal Safe Drinking Water Act.

NRDC was instrumental in recognizing and bringing to national attention the earliest indication of drinking water lead exceedances.

The report speculates that, based on an analysis of U.S. Environmental Protection Agency data reported by states, analogous circumstances may be occurring across the country. They claim there is reason to suspect that an additional 18 million people may be at risk from lead in their drinking water.

The EPA, according to the report, enforces a paradoxical strategy to limit lead exposure under the LCR, for which no safe concentration is implied by a numeric standard.

The rule requires an effort to reduce lead be made only when its concentration exceeds 15 parts per billion. The report alleges substantial under-reporting by local utilities.

According to the group, EPA was never notified through the usual reporting procedures of Flint's high lead concentrations. And in datasets examined for the report, Flint was not listed in the agency's 2015 official list for any lead exceedances.

In addition, the report charges that state regulatory officials and the EPA are extremely lax when investigating lead levels in drinking water over 15 ppb.

According to the report, "more than 1,110 community water systems across the U.S. serving more than 3.9 million Americans had water that exceeded EPA's lead action level, 15 ppb. They serve 3,947,770 people."

In 2015, formal enforcement actions were pursued in only 908 of 8,093 violations of lead exceedances. These violations included both reporting failures as well as health standard-related failures.

States brought 820 of the 908 formal actions taken in 2015. The federal government brought only 88.

The report charges that "nearly 90 percent of Lead and Copper Rule violations are not subject to formal enforcement" by the EPA. In less than three percent of those cases did the EPA seek penalties.

"There is no cop on the beat," the report concluded.

In reality, lead exposure could be more widespread than enforcement actions might suggest. The report obtained EPA data for 2015 and used GIS analysis techniques to illustrate its point. Their conclusion: "Our analysis indicates that in 2015, 18,000,000 people were served by 5,363 community water systems that violated the lead and copper rule."

Although most of those reports were not directly related to exposure exceedances for lead or copper, those above 15 ppb, the report concludes that potentially widespread human exposure to lead in drinking water could be occurring across the country.

Based on the specific problems, the report recommended changes at a national level to protect Americans' from health threats due to lead and copper in drinking water.

These included fixing the national water infrastructure with particular focus on the "disproportionately affected," revising the Lead and Copper Rule, strengthening drinking water enforcement including allowing affected citizens to sue for relief, and addressing environmental injustices.

There is a difference between Florida's LCR data reported by the NRDC in its report and that reported by Florida Department of Environmental Protection in its annual report issued July 1, 2016.

Both reports are supposed to include 2015 data. Florida, in accordance with the LCR's state primacy provisions, has its own methods for screening and reporting.

Florida's report contains apparently fewer incidents of LCR violations than the graphical presentation in the NRDC GIS map.

In response to a query about the apparent discrepancy, DEP Deputy Press Secretary Dee Ann Miller noted that Florida reports only the 2015 cases in its annual summaries.

"The NRDC GIS map has combined exceedances from 2013-2015, whereas the 2015 report only references those systems with exceedances in 2015," she said.

She also noted that what the NRDC report labels as "health violations" includes "submitting administrative paperwork or conducting testing late, and does not necessarily mean the system has elevated levels of lead. These are considered monitoring and reporting violations and are typically handled differently than an action level exceedance."

Exceedance calculations are based on 90th percentile calculations, not averages that the statistical characterization of the EPA data made in the NRDC report.

Miller provided a table showing that in 2015, 21 Florida water utility systems reported lead levels greater than 15 ppb.

Assuming descriptive utility names, eight of the 21 served mobile home or RV parks. Five served a subdivision or small town. The range of reported lead levels, based on Florida's 90th percentile ranking, ranged from 57 ppb to 16 ppb.

That translates to at most a few thousand people in Florida that could have been exposed in 2015 to lead above 15 ppb.

Miller said that all the Florida facilities with violations had performed the required steps to address lead exceedances and "are currently in compliance with all LCR requirements."

Most have completed their second round of sampling and are now eligible to return to reduced monitoring.

"Those that remain are either waiting on a final round of testing or are actively working with DEP and the Florida Rural Water Association to implement corrosion control or other treatment options," she said.

The NRDC report has two primary limitations that readers should be aware of, especially if reading a static PDF or paper copy.

The convenient use of EPA's GIS generated maps may obscure the true number of people at risk of excess lead exposure. In Florida, that is particularly the case.

In addition, the report focuses on utilities' role in lead exposure under the LCR, which is to modify water chemistry to significantly reduce lead mobilization from service lines and fixtures on private property, and to conduct lead monitoring on private property.

The problem for public utilities is that the source of the lead is pipes and fixtures on private property. Rather than endorse more stringent secondary control efforts tasked to local drinking water utilities,

NRDC

Continued on Page 14

The death of Florida's springs can only be stopped through coordinated efforts of concerned public, state officials

By ROBERT KNIGHT, PhD

Springs experts, advocates and the interested public recently convened to review the health of Florida's springs and to develop a plan for their recovery.

The Florida Springs Council, an alliance of 37 organizations representing more than 150,000 members, hosted the Florida Springs Restoration Summit at the College of Central Florida in Ocala.

A total of 55 speakers summarized the current status of springs science and management, and the regulatory, legislative and legal remedies for springs protection.

Their message was clear: Florida's springs are dying due to excessive development and lax enforcement of environmental laws, and this train wreck can only be stopped by the coordinated efforts of the concerned public and state officials.

Invited representatives from the Florida Department of Environmental Protection and from four of the five state water management districts described the status of Florida's 1,000+ springs, as well as changes in spring flows.

A comprehensive analysis of spring flow declines by the Florida Springs Institute indicates that today's springs have lost an average of one third of their historic flows.

This spring flow reduction is attributable to the billions of gallons of groundwater extracted daily for urban, agricultural and industrial uses.

Hydrogeologists described their efforts to use improved models to better manage groundwater supplies and the inability of existing models used by regulatory agencies to assess the impacts of groundwater pumping.

The detrimental consequences of the state's use of flawed models for protection of spring flows was illustrated with case histories from Chassahowitzka and Rainbow springs on the Gulf Coast where the water management district's model estimates that only one percent of the more than 25 percent actual spring flow decline is due to pumping.

To help solve problems caused by excessive groundwater extraction, one speaker made a convincing case for universal monitoring and a reasonable fee on all groundwater uses to incentivize water conservation.

State environmental agencies also reported on the changing water quality of Florida's springs. The effects of intensive land development are evident in elevated concentrations of nitrogen in Florida's springs and in rising groundwater salinity across the peninsula.

Agricultural chemicals, heavy metals and personal care products are increasingly found in springs and in the Floridan Aquifer.

Several speakers pointed out that the state's reliance on agricultural and urban best management practices has not been successful at keeping excessive pollutant loads out of the groundwater.

Advanced practices will be required to truly protect springs water quality.

Several speakers highlighted the plight of springs biota, including fish and manatees. Fish populations have plunged at Silver Springs due to the migratory roadblock at the Rodman Dam on the Ocklawaha River and at Volusia Blue Spring due to declining flows.

After decades of focused protection, Florida's expanding manatee population is threatened by the loss of artificial warm water habitats that are inadvertently created by power plants.

Access to natural springs is the only other suitable habitat to shelter manatees in the winter, and existing impediments such as dams and excessive recreational boating restrict manatees from using some of the state's largest springs.

Florida springs continue to be hugely popular for nature-based tourism and recreation. In fact, human use has risen with four million visitors to springs state parks in 2014-15.

This translates to an estimated annual economic impact of over $350 million and the creation of more than 5,600 jobs. Privately-owned springs provide a similar infusion of money and jobs to local economies in North and Central Florida.

Former employees of the state's environmental agencies made it clear that current environmental leadership, both in Tallahassee and at the water management districts, cannot be relied upon to enforce existing environmental laws intended to protect springs.

Political pressure to accelerate development is just too great for agency staff to oppose.

However, Florida's priceless springs can be saved from total destruction. A knowledgeable and concerned public has the power to counteract the seemingly invincible influence of dark money.

To paraphrase Margaret Mead: " … a small group of thoughtful, committed citizens is the only thing that has ever changed the world."

The Florida Springs Restoration Summit was a giant step along that pathway.

Robert Knight, PhD, is director of the Howard T. Odum Florida Springs Institute.

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Environmental consultant / SJRWMD chair taking heat for alleged ethics violations

By ROY LAUGHLIN

St. Johns River Water Management District Governing Board Chairman John Miklos is the target of potential conflict of interest claims and may be facing a hearing date soon before the Florida Commission on Ethics.

The possible hearing is in response to a complaint issued by Donald Mair, a Volusia County resident and independent candidate for the Florida House of Representatives in the recent election.

At issue is a consulting relationship between Miklos and the city of DeBary regarding a proposal to transfer ownership of 947 acres of conservation land around Gemini Springs from the district to the city.

The transfer deal is the subject of both the ethics complaint against Miklos and a state attorney investigation in May that led to a search warrant and records seizure at DeBary's City Hall.

In addition to his role as the district chairman, Miklos is the president of Bio-Tech Consulting Inc., which specializes in environmental permitting.

The city of DeBary hired Bio-Tech to assist in the acquisition of 947 acres of conservation land around Gemini Springs from the district.

For work associated with the acquisition, Miklos billed his work at a rate of $155 per hour. He later represented the SJRWMD as its governing board chairman at a meeting with city officials.

The city of DeBary submitted paperwork for the Gemini Springs conservation property transfer in April, 2016, intending to use it for stormwater management and to develop a 102-acre parcel on it as a transit-related residential development associated with the adjacent SunRail station.

SunRail is Central Florida's commuter rail line linking several counties.

The Gemini Springs land was acquired in 1999 by the Florida Department of Transportation as conservation land to mitigate construction-related wetland loss from I-4 and State Road 417 construction.

Ordinarily, land set aside for conservation mitigation would not later be available for a real estate development project.

Last spring, investigative reports in the *Orlando Sentinel* and *Daytona Beach News-Journal* brought the land deal into the sunshine.

DeBary officials said that they received assurances from Bio-Tech that a project to acquire conservation lands from the district without restrictions on development would be approved.

They produced an email between a city employee and Bio-Tech Director Jay Baker, specifically requesting a confirmation from Miklos that the city could use the Gemini Spring acquisition without restrictions from the district.

The response led city officials to infer a confirmation of those desired terms. Miklos later said that the DeBary official's inference was "a miscommunication," according to a Nov. 13, 2016, story in the *Daytona Beach News-Journal*.

In spite of the May controversies and ongoing state attorney investigation, the city did not withdraw its request for the conservation land.

At its June 14, 2016, meeting, the SJRWMD Governing Board unanimously approved the transfer. Miklos, the board's chairman, abstained from the vote. The approval is subject to a conservation easement and reverter clause.

If conservation easement restrictions are violated by the city of DeBary, ownership will revert to the district.

The controversy does not seem to have affected Miklos' standing with members of the SJRWMD's board. Board members re-elected him by an 8-1 vote to an unprecedented fourth term as board chairman.

The Florida Commission on Ethics office would neither confirm nor deny that Miklos is the subject of an ethics hearing.

The *Daytona Beach News-Journal* quoted Donald Mair, who submitted the complaint, and included his statement that the board would hold the hearing in December.

The ethics commission agenda for the December meeting, which could confirm that a hearing will occur, will be available online on Nov. 23.

A spokesperson for the Florida Commission on Ethics said that ethics violation hearings are usually confidential, will not be open to the public, and no notice will be provided on the website's agenda unless the subject of the investigation requests it to be public.

The public's only other access to additional details and facts in this case rests on the prospects that the state attorney will bring a lawsuit that includes Miklos as a defendant, or a subpoena for his testimony, which has fewer confidentiality options.

Tighter standards for chromium in potable water may be on the way

By ROY LAUGHLIN

The U.S. Environmental Protection Agency set a maximum contaminant level for chromium of 100 parts per billion, promulgated in 1991 under the Safe Drinking Water Act.

The standard applies to total chromium in drinking water, even though chromium is a two-faced element.

Trivalent chromium is an essential trace element for humans, while hexavalent chromium causes skin rashes and research implicates it as a human carcinogen when ingested at levels orders of magnitude below 100 ppb.

The two forms of chromium, which differ only by the number of valence electrons, convert from one form to another in water as well as in the human body.

The EPA established its standard based on total chromium, tacitly endorsing the same level for hexavalent chromium, the toxic form.

That assumption of a safe level might protect from skin rashes, but many experts believe it is inadequate to protect from cancer over a 70-year lifetime of exposure in drinking water.

Since 2011, EPA has been evaluating a lower chromium drinking water standard and one was due by the end of 2016. But the new standard has been delayed until 2017.

According to the agency, they have collected nationally representative data on the occurrence of both total chromium and hexavalent chromium through the third Unregulated Contaminant Monitoring Rule.

EPA is now actively working on the development of the Integrated Risk Information System assessment of hexavalent chromium.

The agency expects that the draft IRIS assessment will be released for public comment in 2017.

Should the EPA adopt a much tighter hexavalent chromium standard, the cost to drinking water utilities nationwide could amount to millions of dollars for new analysis capability and for use of disposable anionic resins to remove it.

In response to a query, the agency noted that it has had only one exceedance of its 100 ppb current standard among almost 5,000 public water systems that regularly submit monitoring data.

Calendar

December

DEC. 1 – Course: Hazardous Waste Regulations for Generators, Orlando, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 1-2 – Exam: Backflow Prevention Recertification Exam, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 2 – Course: U.S. DOT Hazardous Waste Materials/Waste Transportation, Orlando, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 2-3 – 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.

DEC. 3-4 – 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.

DEC. 3-4 – Exam: Backflow Prevention Recertification Exam, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 5-6 – 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.

DEC. 6 – Course: Initial Training Course for Spotters at Landfills, C&D Sites and Transfer Stations - 8 Hour, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 6 – Course: Refresher Training for Experienced Solid Waste Operators - 8 Hours, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 6-7 – Course: Refresher Training for Experienced Solid Waste Operators - 16 Hours , Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 6-7 – Course: Initial Training for Transfer Station Operators and Materials Recovery Facilities, 16 Hour, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 6-8 – Course: Initial Training for Operators of Landfills and Waste Processing Facilities, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 6-8 – Course: Initial Training for Operators of Landfills and C&D Sites- 24 Hours, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 6-8 – Course: Refresher Training for Experienced Solid Waste Operators and Spotters - 4 Hours, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 7-9 – Conference: Florida Stormwater Association Winter Conference, Palm Harbor, FL. Call 1-888-221-3124 or visit www.florida-stormwater.org.

DEC. 8 – Course: Introduction to Lift Station Maintenance, Jacksonville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 8-9 – Exam: Backflow Prevention Recertification Exam, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 8- 9 – Exam: Backflow Prevention Recertification Exam, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 10-18 – Course: Backflow Prevention Assembly Tester Training and Certification, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 16-17 – Exam: Backflow Prevention Recertification Exam, Venice, FL. Presented by the University of Florida TREEO Center.Call (352) 392-9570 or visit www.treeo.ufl.edu.

January

JAN. 7-8 – Exam: Backflow Prevention Recertification Exam, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 9-13 – 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.

JAN. 9-13 – 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.

JAN. 13-14 – 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.

JAN. 14-15 – 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.

JAN. 17-19 – Course: Microbiology of Activated Sludge, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 118-19 – Seminar: 3rd Annual Winter Water Seminar, Tallahassee, FL. Presented by the Florida Engineering Society, Florida Institute of Consulting Engineers, Florida Association of Professional Geologists, Florida Department of Environmental Protection and others. Call FES at (850) 224-7121 or visit www.fleng.org.

JAN. 18-20 – Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 20-28 – 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.

JAN. 23-25 – Asbestos: Inspector, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 26-27 – Asbestos: Management Planner, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

February

FEB. 2-3 – Exam: Backflow Prevention Recertification Exam, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

FEB. 3-11 – Course: Backflow Prevention Assembly Tester Training and Certification, Ft. Myers, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

FEB. 4-12 – Course: Backflow Prevention Assembly Tester Training and Certification, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

FEB. 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.

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

FEB. 6-9 – Course: Landfill Design and Construction, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

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

FEB. 7-9 – Course: Process Control of Waste Treatment Plants, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

FEB. 7-10 – Conference: The Utility Management Conference, Tampa, FL, Presented by the American Water Works Association and the Water Environment Federation. Visit www.awwa.org.

FEB. 8-10 – Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

FEB. 14 – Course: Asbestos Refresher: Inspector, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

FEB. 15 – Course: Asbestos Refresher: Contractor/Supervisor, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

FEB. 15-16 – Course: Cross Connection Control Conference: Protecting Public Health, Daytona Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

FEB. 16 – Course: Asbestos Refresher: Worker/Trainer, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

FEB. 17-18 – Exam: Backflow Prevention Recertification Exam, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

FEB. 21-23 – Course: Train the Trainer: How to Design and Deliver Effective Training, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

FEB. 24-25 – Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

Corps upbeat about status, future of Everglades restoration efforts

By ROY LAUGHLIN

November marked the 20th anniversary of the Everglades Task Force. The task force, whose members represent federal, state, tribal, county and local governments, is responsible for reviewing and prioritizing Everglades restoration projects.

20 years in, at least 16 distinct projects based on Everglades basins or sub-regions are part of the restoration plan portfolio.

On Nov. 17, Lieutenant Colonel Jennifer Reynolds, U.S. Army Corps of Engineers' deputy district commander for South Florida, hosted a news briefing to discuss the status and prospects of Everglades restoration projects.

Reynold's discussion, beyond the status of specific projects, included several aspects of a bigger picture that knits the Everglades restoration projects together to form the most extensive environmental restoration project anywhere on earth.

She said the corps is actively working on projects throughout the 200-mile region between the Kissimmee River headwaters in Central Florida south to Florida Bay. Everglades restoration, she said, is a "complete mosaic of challenges" at all phases of completion.

Reynolds provided details on several efforts that include one or more named projects. The Modified Water Deliveries Project, aka Mod Waters, that directs water through several counties and releases it to Everglades National Park is perhaps closest to completion.

It began early evaluation testing in 2015—even as three projects in the complementary C-111 South Dade Project were incomplete at the southern end, preventing fully optimized water releases into the national park.

Two of these projects were contracted out in October, 2016, and the final one will be contracted in early 2017. The wet winter required adjustments in schedule and effort, Reynolds said. But the C-111 project remains roughly on schedule.

The Mod Waters and C-111 South Dade projects "are necessary to realize the projects upstream," Reynolds said, explaining how project priorities and schedules have been set.

Others, such as the Western Everglades Restoration, Lake Okeechobee Watershed and Loxahatchee River Watershed Restoration projects, are now in the planning stages.

Some received authorization to begin planning earlier this year. The Western Everglades project's planning began in mid-2016 and will continue through 2017.

The Central Everglades Planning Project, which is awaiting authorization, was the focus of several questions from attendees for two reasons.

The first was because the CEPP and its reservoirs in the Everglades Agricultural Area will significantly reduce Lake Okeechobee water releases to the Indian River Lagoon, which has experienced several recent ecologically crippling algal blooms as a result of the releases.

The second reason is that Sen. Joe Negron, R-Stuart, the incoming Florida Senate President, has proposed a plan to purchase land in the EAA and begin reservoir construction at some point before the 2025 date currently associated with the expected CEPP.

Reynolds noted that CEPP is still awaiting congressional authorization. After that, it would require congressional appropriations before construction could begin.

Negron has not released sufficient details to allow for technical comments on the reservoir plan with respect to projects in progress.

Reynolds noted that Congress "wants a non-federal partner. The corps is not authorized to move forward without an interested partner, both in planning and in paying for the project's construction."

If Negron gets the project funded, she noted, "then perhaps the date to begin the EAA reservoir could be moved up. Currently, the EAA study, by agreement with the state of Florida, is scheduled to begin in 2021."

Several questions arose about the prospects for continued funding in light of the results of the presidential election.

"There are always some changes with each change in administration," Reynolds said. "We do not expect any changes in the big picture."

She conveyed an optimistic funding picture moving forward.

In 2016, the corps contracted for $126 million in spending and expects to contract approximately the same level of spending for 2017.

In addressing fears that funding may be severely curtailed or stretched out, she said that "there are things we can do that provide substantial benefits without doing all the other projects.

"We are realizing that with restoration projects, it's the last 15 percent of the construction that (provides) the other 90 percent of the restoration benefits."

She noted that the corps has not made contingency plans for suspending or halting Everglades restoration in place should Congress fail to provide the necessary approvals and appropriations.

Both Florida and the federal government have a binding agreement to complete restoration activities.

Reynolds conveyed positive near-term prospects for continuance of the restoration effort.

DEP awaits odor reduction plan from Pace chemical company

By PRAKASH GANDHI

State environmental officials are awaiting an action plan from a Northwest Florida specialty chemical company that faces a lawsuit from nearby residents over objectionable odors emanating from the plant.

Late last year, a lawsuit was filed against Taminco Corp. in the city of Pace. More than 150 residents signed on to the potential class-action lawsuit in Santa Rosa County.

Miami-based Aronfeld Trial Lawyers filed suit in November last year, claiming that the chemical company failed to maintain its Pace facility resulting in damages to the residents.

Odors were reported by dozens of residents in December, 2014, and into January, 2015, from Pace all the way south to Pensacola Beach.

Dozens of other odor-related complaints have also been reported.

Brandy Smith, external affairs manager for the Northwest District Office of the Florida Department of Environmental Protection, said that when the facility's operating permit was being processed for renewal, the department incorporated specific permit conditions related to objectionable odors.

One of those specific conditions required Taminco to perform an evaluation of the amine flare system by May 22, 2016, and then to submit an action plan for improving the system's operation to minimize potential odors.

The action plan was due to DEP in November.

"We have been notified by Taminco that the evaluation was completed in a timely manner, and that the action plan will be submitted by the due date," Smith said.

Smith said an onsite inspection was conducted in September. During the inspection, facility staff explained the steps they have taken to help ensure odors and leak-free operations.

These include a dedicated leak patrol technician; and the use of infrared cameras, sonic sound detectors and compact gas cylinders to quickly identify small leaks.

"During the inspection, no objectionable odors were detected," Smith said. "The inspection report has not yet been finalized, and we are awaiting some information from the facility before the report is completed."

ODORS
Continued on Page 16

SFWMD supports drinking water access overseas

Staff report

South Florida Water Management District employees and governing board members have been raising money for a nonprofit organization that helps people in developing countries gain access to clean drinking water.

Water for Small Villages, an organization comprised of several district employees, works to help areas around the world obtain access to clean drinking water. Using vacation time and volunteer support, the organization has improved drinking water supplies in Haiti and Nepal for more than 1,400 people.

Several fundraising events organized by district employees raised more than $19,000 for the group's work.

Steve Krupa, president of Water for Small Villages and district Hydrogeology Section leader, said the organization is committed to finishing work on projects in Haiti and Nepal.

For more information about the work performed by Water for Small Villages or to support the nonprofit's mission of improving clean drinking water supplies worldwide, visit www.waterforsmallvillages.org.

Scott issues executive order on emergency notification rule for environmental contamination

By ROY LAUGHLIN

Florida experienced two major pollution releases this fall: Mosaic Fertilizer's gypstack collapse and the city of St. Petersburg's release of 150 million gallons of untreated sewage.

The public was deservedly outraged.

In response to the criticism, Gov. Rick Scott issued an executive order that directed the Florida Department of Environmental Protection to draft Emergency Rule 62ER16-01, "Public Notice of Pollution."

The emergency rule requires parties responsible for an environmental contaminant release that constitutes a public risk to notify the public within 24 hours of discovery.

The quickly drafted rule requires public notice whether or not contamination moves off the responsible party's site, and whether or not the parties have existing reporting obligations under current law to DEP or other state agencies.

DEP's emergency rule may remain in effect for up to 90 days and may be renewed. The rule expires on Dec. 25, unless renewed.

"This applies to any pollution affecting Florida's air or water resources, such as unauthorized discharges of treated and untreated wastewater and industrial wastewater release," said Dee Ann Miller, DEP deputy press secretary.

The emergency rule requires reporting to DEP the following: the reporting party; installation name, address and location; permit number if the facility or location holds a permit; and contact person for subsequent information.

The rule stipulates including the suspected source and cause of the incident or contaminant release; amount; medium (soil, water or air); potentially affected areas beyond the property boundary; potential risks to public health, safety or welfare; identification of other parties notified of the incident and the time notification occurred; and any other helpful information.

This information is to be supplied to the department within 24 hours by email to a DEP website.

Within the same 24-hour time frame, responsible parties must inform broadcast media and newspapers, who will presumably pass the information along to the public.

Although not explicitly stated, one could read the rule to require that the same information required by DEP, as described above, must be given to broadcast media and newspapers near the affected location.

If responsible parties become aware that contamination has spread to an adjacent property, they must notify DEP in writing within 24 hours. It is not explicit whether an email fulfills the obligation of written notification to adjacent property owners.

The new DEP emergency rule is a prelude to a permanent rule. The department intends to issue a rule that would make the language in the emergency rule permanent.

DEP scheduled five public meetings across Florida in October. The formal rule hearing was held in Tallahassee on Nov 7.

In response to the new rule, public utility representatives demanded a clearer picture of what needs to be reported to the public.

For example, public wastewater utilities currently report all sewage releases or overflows to surface waters to the department, even if they are small volumes and are cleaned up quickly.

Reporting to DEP works satisfactorily to identify utilities that have recurrent problems meeting state rules and permit requirements.

But if public reporting through the media is required, public utility representatives want clearer guidelines regarding what needs to be reported and public reporting exemptions from insignificant or easily cleaned up events.

A spokesperson for FPL noted that regulated industries that already have requirements to report to DEP should not also be required to notify the public.

Both public and investor-owned utilities criticized the stark reporting requirements as a possible source of needless public hysteria.

After the November rule hearing in Tallahassee, DEP posted a revised rule with substantial changes reflecting the criticisms of public utility and regulated industry representatives.

The revised rule stipulates a reportable release as a release to "outdoor air, land or waters … at any level or quantity that is not authorized by law … and is reportable to the State Watch Office under department requirements such as those contained in rules, permits, orders and variances."

The revisions identify and define hazardous substances and threshold concentrations established by reference to existing federal standards.

For contaminants and pollutants not explicitly characterized as hazardous or extremely hazardous, the revised rule requires notifications for a release that "poses an immediate danger to public health, safety or welfare."

The emergency rule stipulated that notification must characterize "potential risks." The language in the revised rule has been further qualified to risk information "as specified on a material safety data sheet or comparable source."

Where the emergency rule required reporting "other useful information," the revised rule now specifies that recommended precautions, whether the release is migrating through air, water or soil beyond the boundaries of the release site and where the release is known to have migrated, constitute useful information to be included in the public notice.

The revised rule states that notices provided to local governments and media must be sent electronically or delivered by hand.

Notices to property owners may be provided by "electronic delivery," which presumably includes email and social media.

The emergency rule stipulated only postal mail or hand delivery to property owners.

Violations of the revised rule may be subject to fines and civil and/or criminal penalties as outlined in 403.161, FS.

DEP 's plan is to finalize the permanent rule prior to the emergency rule's Dec. 25 expiration.

If the emergency rule expires without its successor permanent rule in place, DEP has the option of reissuing an emergency rule.

The new rule's implementation could be delayed by a legal challenge.

DEP's final rule could require legislative approval if economic analysis of the proposed rule indicates that it will have an adverse impact of more than $1 million on economic growth, private-sector job creation or employment or private sector investment; an aggregate impact of more than $1 million on business competitiveness; or increase aggregate regulatory costs by more than $1 million.

However, DEP asserts that these factors do not apply.

The new emergency rule's language may not experience a smooth glide path through the system if it ends up requiring legislative approval.

Former State Representative Lake Ray said the proposed rule may conflict with existing laws.

As DEP's Miller explained, legislation will amend current law that only requires public notification when pollution moves off site of where the incident took place and threatens public health.

This legislation will put the 24-hour public notification requirements into law as well as increase fine amounts and penalties on any violators.

As the Florida Legislature and governor do not always see eye to eye on environmental issues, there is no sure bet whether or not lawmakers will back the governor on this new rule.

SJRWMD approves ag cost-share projects

Staff report

The St. Johns River Water Management District Governing Board approved the rankings of projects that will share $1.5 million in agricultural cost-share funds to assist farmers, growers and ranchers in water conservation projects.

Executive Director Ann Shortelle, PhD, said the 15 projects will make a significant impact on water resources through reductions in water and fertilizer use.

Projects span six district counties and include irrigation retrofits, improved fertilizer application equipment, soil moisture sensors and ponds to capture water that can be reused for irrigation.

In total, growers will provide more than $534,000 in matching funds, will reduce water use by an estimated 333.52 million gallons a year, reduce nitrogen use by 15,510 pounds a year and reduce phosphorus by 2,539 pounds a year.

The district developed the Agricultural Cost-Share Program in 2015 to assist farmers and growers with implementing projects that conserve water and result in nutrient loading reductions.

To date, 40 projects have been approved and 29 have been completed.

Permit applications pending for oil, gas development off Atlantic Coast

Staff report

Last spring, the Obama administration formally withdrew plans to offer Outer Continental Shelf leases for oil and gas development in the Atlantic Ocean between Florida and New Jersey.

But the Bureau of Ocean Energy Management, a bureau within the U.S. Department of the Interior, continued to accept permit applications for seismic surveying on the Atlantic offshore continental shelf between the two states.

Four companies currently have survey permit applications pending off the East Coast of Florida, including Spectrum Geo Inc., GX Technology Corp., TDI-Brooks International Inc. and TGS.

The original estimate was that qualifying permits would be approved in November, 2016.

Seismic surveying relies on underwater sonic cannons that create loud blasts underwater.

Environmental activists strongly oppose the use of sonic cannons for underwater oil and gas surveys.

Backed by substantial academic research findings, they maintain that the deafeningly loud blasts harm the hearing of marine mammals, fish and other marine organisms.

Consequently, seismic surveying permits require an Incidental Harassment Authorization issued by the National Marine Fisheries Service.

NMFS has not yet published a proposed authorization for seismic surveying off the U.S. Atlantic Coast in the *Federal Register*.

This process includes a 30-day public comment period prior to issuing a permit, according to Caryl Fagot, in BOEM's Office of Public Affairs for the Gulf of Mexico Region.

It is therefore unlikely that seismic surveying off the U.S. Atlantic coast will commence before February, 2017, and if it is permitted, it will likely commence later in 2017.

NRDC

From Page 9

perhaps NRDC might have endorsed replacement of lead-leaching service pipes and fixtures on private property.

If so, that would be a local government task because local governments can use building codes and public safety ordinances to accomplish replacement.

State and federal agencies lack the primary authority to reduce lead exposure in drinking water by removing the remaining sources.

The prospects for reducing lead exposure in drinking water is replacing pipes, it seems, something the reports significantly overlooks.

SINKHOLE

From Page 1

Consultants and contractors also conducted slant drilling from a safe distance from the sinkhole to investigate both its underground dimensions and the geological stability around it.

By late October, the investigations allowed Mosaic and its contractors to define a safe zone around the sinkhole.

Personnel and equipment now occupy a safe perimeter around the sinkhole, and are preparing the gypstack surface for drilling and grouting.

The safe zone is sufficiently stable to allow a work pad base that will support drilling rigs and cement trucks supplying grout.

Mosaic's intention is to stabilize the sinkhole with grout "just above the confining layer." After that, the sinkhole can be filled.

Grouting to seal the sinkhole is set to begin this month, with a schedule for completion to be released.

Mosaic officials said that response and remediation efforts may exceed $50 million.

Drinking water contamination is the risk of greatest concern at this time because the Floridan Aquifer is the primary drinking water source in that part of the state. But residents around the plant depend on both the Floridan as well as the superficial aquifer for their water.

As of mid-November, Mosaic and DEP had scheduled sampling from 1,294 local drinking water wells following requests from nearby property owners.

The water analyses are being conducted predominantly by third-party consultants who have visited or taken samples for 1,255 of those 1,294 wells scheduled for sampling.

Mosaic prioritized sampling so that private wells closest to its property boundaries have first priority for sampling visits.

The sampled wells form a halo with a 20-mile radius around the sinkhole.

Mosaic asserts that no private wells have been contaminated by low pH water, radiation or high sulfate levels as of late November.

These results imply that the gypstack contents contaminated neither of the two local aquifers tapped by private drinking water wells since the sinkhole opened in late August.

Nevertheless, Mosaic has responded to 659 requests for bottled water from residents near the facility.

Through mid-November, DEP's daily update noted that the department had collected at least 169 split samples.

DEP and the Florida Department of Health independently analyzed 46 samples from private drinking water wells.

DEP stated that it has reviewed over 900 results from private drinking water well analyses and that "all met federal Safe Drinking Water Act standards" and showed no impacts related to process water from the sinkhole at the plant.

"Even though these results show no impacts related to the process water from the sinkhole, the priority of DEP and DOH is safe drinking water," according to the department's website. "DEP and DOH are confirming with the homeowners that the wells are used for drinking water purposes and, if so, offering additional testing and reviewing treatment options."

Concerns were also raised about the level of radioactivity in process water shortly after the sinkhole collapse.

For each ton of ore treated, about a pound of uranium is precipitated by the same sulfuric acid treatment that yields phosphoric acid from phosphate ore.

Some of that uranium is radioactive.

As recently as the 1980s, uranium was a commercially valuable byproduct of phosphate ore beneficiation. But when uranium is not harvested, it remains in the gypstack wastes, which may become "slightly radioactive," according to press releases about the sinkhole.

In late October, Mosaic released the following statement: "Testing conducted at nine wells returned results (for alpha radiation) that were within normal drinking water standards … The samples were submitted to a third-party laboratory that reported levels of gross alpha at all the water wells tested are within health-based drinking water standards established by the U.S. EPA and Florida DEP."

Because there was no excess radiation measured, no further effort to measure radiation emitters such as uranium, radium or thorium occurred. This is consistent with DEP procedural rules.

"These results further verify there have been no off-site impacts as a result of this incident," Mosaic noted in a press release.

Since that time, analysis of two drinking water wells indicated radiation levels in excess of drinking water standards, but Mosaic's update did not attribute the levels to fugitive radionuclides from their plant.

Radiation levels above drinking water standards of 4 picocuries per liter are the most common exceedances reported in Florida's most recent two-year summary of the state's water quality.

Natural background radiation sources are the usual cause of Florida's excess radiation levels in drinking water. It is plausible that the radiation in the two wells with high levels came from geochemical sources, not from contamination.

As of Nov. 11, neither Mosaic nor DEP have released any numerical sampling data or other data about the sinkhole other than narrative summaries.

This is understandable considering that a lawsuit has been filed. Whether the public will have to wait for a trial before the data are released remains to be seen.

In the meantime, DEP is overseeing the public's interest while Mosaic's staff continue pumping water from the aquifer to recover process water contaminants and its consultants prepare for a major grouting and filling project.

Advocacy groups file notice to sue St. Pete for wastewater discharges

By BLANCHE HARDY, PG

Late this fall, Suncoast Waterkeeper Inc., Our Children's Earth Foundation and the Ecological Rights Foundation filed a 60-day notice of intent to file suit for serious and ongoing violations of the Clean Water Act by the city of St. Petersburg for discharges from their wastewater treatment facilities.

The notice is the first step required for filing a lawsuit in federal court.

The advocates reference St. Pete's recent discharges of untreated sewage to Tampa Bay and elsewhere, and the resulting human health risks and environmental damage as the basis for their action.

"St. Petersburg's sewage discharges are not new, but they have gotten much worse since the city inexplicably decided to take one of its wastewater treatment plants offline in 2015," said Annie Beaman, a member of all three organizations.

"In August 2015, 30 million gallons of raw and partially-treated sewage overflowed into Clam Bayou, Eckerd College and surrounding neighborhoods," she said. "Mayor Rick Kriseman said he preferred to dump into Tampa Bay instead. So, in August 2016, 10 million gallons were dumped into Tampa Bay, then another 150 million gallons in September with Hurricane Hermine."

According to the advocates' filing, the city repeatedly violated the CWA by discharging raw and partially treated sewage without National Pollutant Discharge Elimination System permit authorization and violated their Municipal Separate Storm Sewer System permit by allowing the discharge of non-stormwater into the stormwater system.

"One of the most troubling aspects about closing the Albert Whitted plant is that several hospitals relied on it to treat sewage," she said. "Disease-causing microbes are the primary human health risk associated with sewage spills.

"As multiple studies have shown, dangerous pathogens can persist in sewage-contaminated waters."

The advocates also find the threats to the environment and natural ecosystems troubling.

Nutrient pollution can stimulate biological and chemical changes that result in eutrophication, she noted, adding that repeated sewage dumping can smother and kill seagrass.

"Wildlife suffers greatly when massive sewage spills occur," she said.

The advocates have a successful history addressing related matters.

"When we litigate these kinds of cases, we work toward federal consent decrees that will have the weight of the authority of the court," she said. "We have repeatedly found that having a federal court action is an effective tool for ensuring citizen input and transparency, as well as real progress on the underlying sewage infrastructure and maintenance issues.

"A consent decree would ensure that the city will make short-term improvements in necessary maintenance and long-term infrastructure projects that will build the system capacity needed to avoid large wet weather sewage spills in the future."

FEDFILE

From Page 2

mixtures. Those listed above, however, are now subject to expedited EPA rulemaking.

The EPA's next step for these five chemicals is to identify where they are used in the path to human exposure.

Following that, the agency will propose limitations to their use that will "reduce exposure to those chemicals to the extent practicable."

Since most of these chemicals have been in use for decades, are already widely dispersed in the environment, and are both persistent and bioaccumulate in organisms, the agency may propose new exposure reduction strategies that have no precedent in EPA risk reduction efforts.

"These pollutants can transfer among air, water and land, and span boundaries of geography and generations," the agency noted.

Advanced coral reef conservation programs. The National Oceanic and Atmospheric Administration and the Coral Reef Conservation Program will support conservation projects and studies to benefit coral reef ecosystem management in seven states and territories, plus the Caribbean and Micronesia—to the tune of $9.3 million.

The projects focus on global climate change, land-based sources of pollution, unsustainable fishing practices, and highly threatened coral regions and watersheds. These are the primary global threats to coral reefs.

The new projects build on long-term partnerships with the National Fish and Wildlife Foundation and the Nature Conservancy.

Nearly half of the funds awarded this fiscal year support coral reef conservation projects conducted by state and territorial resource management agencies.

In addition, nongovernmental organizations, community groups and academic partners also received support.

A limited number of international projects were also supported in Micronesia, Central America and the wider Caribbean region.

The 2016 grant recipients list included six Florida entities.

The Florida Department of Environmental Protection will receive about $800,000 for its Coral Reef Conservation Cooperative Agreement.

The Gulf of Mexico Fishery Management Council will receive $192,000 to support its Coral Reef Conservation Program's Fishery Management Council Coral Reef Conservation Agreements.

The South Atlantic Fishery Management Council will receive about $375,000 for a similar conservation program in Florida's Atlantic waters.

Two Florida universities and a research laboratory also received research contracts under the NOAA Coral Reef Conservation Program.

Florida Atlantic University will receive about $63,000 for assessing freshwater discharge impacts on coral health and implications for water resource management in Southeast Florida.

Nova Southeastern University will receive about $50,000 to identify disease resistant and thermal tolerant threatened coral genotypes.

Mote Marine Laboratory will receive about $50,000 to characterize the microbiome of corals resilient to climate change in ocean acidification in St. Johns, U.S. Virgin Islands.

The $9.3 million announced for this year's award is in addition to the more than $112 million in federal funding and competitive grant opportunities funded since 2002.

This year, an additional $6 million came from in-kind funding and additional support from recipients.

DEP Petroleum Restoration Program accepting applications for ACP

Staff report

The Florida Department of Environmental Protection Petroleum Restoration Program's Advanced Cleanup Program has an open application period between November, 2016, and January 3, 2017.

Applicants with individual sites or bundled sites may submit applications.

Detailed information for applicants as well as links to application forms is available online at http://dep.state.fl.us/waste/categories/pcp/pages/announcements.htm.

These include the Advanced Cleanup Program introduction, bid applications, application for bundled sites, limited contamination assessment report preparation guidance; PRP site access agreements and site contractor recommendation forms.

The current Advanced Cleanup Program application process incorporates some changes compared to prior funding applications, so all applicants are encouraged to read the entire instruction set.

The application must be submitted both electronically and on paper copy with instructions for the latter provided in the instructions.

Ken Busen, environmental administrator, is the point of contact for more information or comments. He can be reached at kenneth.busen@dep.state.fl.us.

Escambia County receives EPA funding to install floating treatment wetlands

Staff report

The U.S. Environmental Protection Agency's Gulf of Mexico Program announced that the Escambia County Board of County Commissioners received a $295,500 cooperative agreement for the Bayou Chico Water Quality Improvements project.

Taylor Kirschenfeld, a senior scientist with Escambia County's Board of County Commissioners, will lead the restoration effort.

Floating treatment mats will be installed in the Bayou Chico Watershed to improve water quality via nutrient uptake.

"When the vegetation is harvested, it will be replanted at local living shoreline projects where it will continue to improve water quality, provide estuarine habitat, and provide cuttings for the next crop of vegetation for the floating treatment wetlands," said Kirschenfled.

"Thus, the project is zero waste and self-sustaining," he said.

Escambia County will help to improve water quality in portions of Bayou Chico by installing the floating mats in Jackson Lake, an upstream tributary connected to Jackson Creek, Bayou Chico and Pensacola Bay.

Vegetation from the treatment mats will improve water quality via nutrient uptake from detained storm event flows thereby reducing the amount of excess nutrients being conveyed by Jackson Creek to Bayou Chico.

This cooperative agreement will further the strategic goals and objectives of Gulf of Mexico Program.

ODORS

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Still, Smith said 41 complaints against Taminco have been lodged with DEP over the past two years.

Area residents have complained for decades about the quality of air surrounding the plant.

Lawyers representing the residents said issues range from a loss in home value to physical ailments.

Since 2014, Taminco has been owned by Tennessee-based Eastman Chemical Co. Eastman manufactures chemicals, fibers and plastics materials used as ingredients in a variety of products.

Company officials could not be reached for comment at press time.

In a statement, the company said the Pace facility has always striven for operational improvement, and reducing the potential for off-site odors has been a big part of those efforts.

"Eastman has devoted substantial engineering resources from its corporate headquarters to assist Pace facility personnel in enhancing the operation of this facility," the statement said. "These enhancements have included measures to reduce the potential for offsite odors to occur."

TRI-STATE

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their evidence and arguments, the special master will make his recommendation to the Supreme Court.

The Supreme Court justices will consider the recommendation and hear Florida's and Georgia's rebuttals before making a final ruling expected sometime in late 2017 or early 2018.

The outcome has the potential to affect millions of people and major business sectors in both states.

Previous lawsuits focused on federal agencies and how they managed, or mismanaged, the ACF basin's waters.

In apportionment cases, the Supreme Court is asked to divide the actual water between the states, specifically how much can be used by each.

Florida has foregone delivery of a specific amount of water at the state line. To win the case, Florida must demonstrate a substantial injury is being done to the state that the court can address.

Florida is requesting Georgia's water consumption be reduced to protect fresh water supply to the Apalachicola River and Bay.

Florida attorneys argue that increased consumption in the Atlanta metro area and by Georgia agribusinesses are resulting in lower water flows and higher levels of salinity in Apalachicola Bay that are damaging the bay's oyster fisheries and other coastal businesses.

Florida noted that previous efforts to form a tri-state compact between Florida, Georgia and Alabama to manage ACF basin waters failed because Georgia refused to accept any conservation cap on the resource.

Georgia denies Florida's allegation and claims current and future water use within Georgia will have only a minor impact on the flow of the Apalachicola River at the state line.

Georgia's attorneys argue environmental factors and poor resource management by Florida officials have caused the collapse of the Apalachicola Bay oyster fisheries.

Georgia's lawyers said that limiting the use of water from the Chattahoochee and Flint rivers will jeopardize $18 billion of Georgia's economy by adversely affecting irrigation-dependent industries such as peanut, cotton and corn farming.

They claim further that limiting consumptive use in Atlanta would restrict the city's future growth and development.

Environmental advocates in both states want to preserve the ecological viability of the entire roughly 20,000-square-mile basin.

Florida environmental advocates have requested that the court protect the region, including 30 animal species and 103 plant species considered endangered or threatened.

Special Master Lancaster repeatedly urged the states to negotiate a settlement before litigation reached this point, warning both groups of attorneys that a ruling will make at least one, perhaps both, states unhappy.

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