

Florida Specifier



Practical Information For Environmental Professionals

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Perdido Key cleanup 5

The U.S. Coast Guard and Florida Department of Environmental Protection led cleanup efforts to remove oily sand from a Perdido Key beach after Hurricane Sally's visit.

Lake O impacts 6

Under a recently issued court order, the U.S. Army Corps of Engineers is required to assess how water releases from Lake Okeechobee are sparking harmful algae blooms downstream that adversely affect endangered species and critical habitat.

Stormwater planning 7

DEP began formulating new plans for how it will manage stormwater runoff and its impact on surface water quality in the future.

PRP coalition formed 10

Members of seven Florida environmental industry associations formed a coalition in response to the "pause" in funding for DEP's Petroleum Restoration Program. Steve Hilfiker provides the details.

Climate change report 13

The Southeast Florida Regional Climate Change Compact issued a new report describing the potentially devastating financial impacts climate change could bring to the region.

Departments

Calendar	11
Federal File	2
Florida Notes	3
Perspectives	10
Water Watch	4

Got a story lead?

Got an idea for a story? Like to submit a column for consideration? Let us know. And don't forget to fill us in on your organization's new people and programs, projects and technologies—anything of interest to environmental professionals in Florida. Send to P.O. Box 2175, Goldenrod, FL 32733. Call us at (407) 671-7777; fax us at (321) 972-8937, or email mreast@enviro-net.com.

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Photo courtesy of Geosyntec Consultants

Boone Abbott, at left, and Zack Munger of Geosyntec Consultants set up to conduct pneumatic slug testing on a Floridan Aquifer drilling location at a Central Florida Superfund site. Twenty-seven Superfund sites have been closed across the country in 2020, according to the U.S. Environmental Protection Agency.

Contractors, interested parties shift into high gear in effort to restore PRP funding

By ROY LAUGHLIN

The Florida Department of Environmental Protection's Petroleum Restoration Program experienced another low-spending month in October. Similar to September, the program booked zero contractor selection formula algorithm assignments.

Encumbrance activity was also low over the two-month period.

In October, the dollar total for work orders/purchase orders encumbered was \$3,099,629. That total was up a little from September, the first month following the PRP announcement of a "pause" when only \$2,524,065 was encumbered.

However, the trend in net PRP spending was down even more in October with \$-6,178,012 encumbered compared to \$-2,970,265 for September.

The negative values reflect money swept to other state uses from the PRP budget. This happens for various reasons including reductions in project scopes of work and projects ending without the money being spent. The sweeps are part of usual DEP operating procedure.

But the negative spending indicates that no new funding—above recovered money—is occurring in the state petroleum cleanup program.

In September, PRP officials announced a "pause" in new work. The following categories were active or made payments for work in progress or recently completed: the Low Score Site Initiative, \$47,928; operations and maintenance, \$2,807,857; and well abandonment/site rehabilitation completion order, \$243,843.

The remainder of the PRP activity categories had zero dollars spent, according to the program's monthly dashboard summary.

In September, a group of industry

association leaders and PRP stakeholders formed an informal coalition of environmental associations. (See Steve Hilfiker's column at top of Page 10.)

Leaders of the coalition have carefully studied PRP financial information provided by the department. The coalition is now in the process of seeking verification for the estimated remaining budget and other related issues.

Coalition members believe that the projections made at August's Revenue Estimating Conference were low and that more money should be available for PRP operations this fiscal year.

In a letter to Gov. Ron DeSantis

dated Oct. 9, the coalition explained that since the lockdown ended in May, receipts from the fuel tax that funds the Inland Protection Trust Fund have rebounded sharply.

They noted that fuel tax collections in August, 2020, were within eight percent of the prior fiscal year's August collections.

These tax collection levels do not seem to justify any major pause in PRP spending. Coalition members believe the IPTF revenue data supports PRP

PRP
Continued on Page 14

Annual State of the River Report for the Lower St. Johns Basin released

By BLANCHE HARDY, PG

The 13th Annual State of the River Report for the Lower St. Johns River Basin was released in October, highlighting the results of analyses of the past year's river conditions.

Again this year, the report presented a good news/bad news scenario.

"The good news is that total nitrogen in the Lower St. Johns continues to decline," said St. Johns Riverkeeper Lisa Rinaman. "This has been a major priority of ours for the past 20 years."

Two Riverkeeper lawsuits have resulted in more stringent pollution standards for nitrogen levels in the river, she said.

The 2020 State of the River Report also provided details of positive developments regarding the river's health.

During 2019, only five percent of analyses of mainstem and tributary sampling exceeded the numeric nitrogen standard for peninsular Florida, the most comparable concentration standard available, according to the report.

The trend in total nitrogen over the period from 2015 to 2019 also improved.

Eighty-five sanitary sewer overflows were recorded within the reporting period, releasing a total of 959,267 gallons of wastewater—an improvement over prior years.

Other observations produced mixed results. Dissolved oxygen levels were satisfactory in the mainstem but continue to be unsatisfactory in the tributaries where fecal coliform levels still exceed water quality criteria.

The good news is that the magni-

RIVER
Continued on Page 16

Correction

In our October/November 2020 issue, the Water Watch brief regarding funding for two wellfield projects in Polk County mistakenly cited the South Florida Water Management District as a partner in the wellfield effort—instead of the Southwest Florida Water Management District. We regret the error.

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New NOAA research effort will focus on predicting harmful algae blooms

Staff report

The National Oceanic and Atmospheric Administration recently started work on a four-year research program on harmful algal blooms to better predict the blooms through an understanding of factors that influence their biological cycle. The study will also examine the socioeconomic effects of HABs.

NOAA will provide \$10.3 million over the next three to five years for the study.

During fiscal year 2020, NOAA has already awarded \$6.3 million to support

16 projects. In its recent announcement, they announced that \$4 million more is being provided to support 11 new projects.

Florida is one of the states receiving new project support. One study to be conducted by members of a Florida Gulf Coast research consortium, "MERHAB: Implementing *Karenia Brevis* Respiratory Risk Forecast System in the Gulf of Mexico," will benefit Floridians affected by the *Karenia brevis* toxin.

Other new studies are set for Alaska, California, Delaware, the Gulf of Mexico, the Great Lakes, New England, the Pacific

Northwest, Puerto Rico and the U.S. Virgin Islands.

The focus of the efforts spans the range of topics of interest associated with HAB, including enhanced detection of HAB toxins; control methods applicable to freshwater and marine cyanobacteria; the study of HAB toxin transfer through food chains, and the magnitude of bioaccumulation, with a focus on modeling; HAB occurrence forecasts and prediction; and HAB's socioeconomic effects.

The funded studies address many HAB characteristics that may pose hazards and risks, but have not yet been extensively studied.

In addition to funding the research programs described above, NOAA provided \$1 million to the U.S. Integrated Ocean Observing System to support five pilot projects orchestrated by six regional associations.

This work will focus on data integration and information services derived from HAB monitoring and detection. Of special interest will be the extent, toxicity and duration of the blooms.

This information is intended for use by fishermen, aquaculture, drinking water utilities, and others affected by HABs.

IOOS also received an additional \$325,000 in fiscal year 2020 to fund ongoing water sampling related to HABs. This effort features the use of autonomous surface vehicles.

Florida, it seems, may have a special stake in these recently initiated studies. NOAA is funding research to support managers trying to cope with increasing and recurring toxic algae blooms that continue to affect environmental and human health in coastal communities, according to David Kidwell, director of NOAA's National Centers for Coastal Ocean Science Competitive Research Program.

The projects will address the largely unknown socioeconomic impact of blooms in various regions and assist with monitoring for algal toxins.

Groups push back against relaxed contamination rules. Nine advocacy groups, including the Environmental Integrity Project, Earthjustice and the Center for Biological Diversity, filed suit against the U.S. Environmental Protection Agency over the agency's Steam Electric Reconsideration Rule.

In its press release, EPA explained that the regulation "revise(s) the technology-

based effluent limitation guidelines and standards for the steam electric power generating point source category applicable to flue gas desulfurization wastewater and bottom ash transport water."

The final regulation is estimated to save about \$140 million annually in after-tax compliance costs as a result of less costly

FGD wastewater technologies that could be used with the modification of the Steam Electric Power Generating Effluent Guideline's 2015 rule limitations, according to the agency.

Revisions will modify the 2015 zero discharge limitations and provide an additional two-year extension for compliance.

Perhaps most significantly for national contaminant reduction, the revision transfers the authority to meet federal rule stipulations to state agencies.

The advocacy groups said that the revised rule would allow primarily coal-burning power plants to use

less expensive and less effective treatment technologies to remove toxic chemicals, heavy metals and arsenic from stack scrubbing and boiler bottom water before releasing it to rivers and lakes.

This, they said, poses a human health risk as well as a toxicity risk to ecosystems and specific species.

In a press release, the advocacy groups noted that steam electric power plants remain the U.S.' largest industrial source of toxic water pollution. Power plants contribute 30 percent of all toxic water pollutants, according to a separate EPA accounting.

Toxins, primarily derived from flue gas scrubbing, include arsenic, lead, mercury and selenium. The discharges may also carry high levels of plant nutrients, bromide and other harmful substances.

The majority of the country's coal-burning power plants have already complied with the 2015 rule, sharply reducing their contaminant release. The extent to which they will be required to continue using and maintaining that best available technology is uncertain, according to the groups.

This rule is a true step backward in water contamination prevention, claimed the groups. Some rivers and lakes could become unexpectedly contaminated if power plants stop using effluent treatment equipment.

In addition to the three advocacy groups named above, partners in the suit include Chesapeake Climate Action Network, Clean Water Action, PennEnvironment, Prairie Rivers Network, Sierra Club, Waterkeeper Alliance and the Southern Environmental Law Center.

The lawsuit was filed in the U.S. Court of Appeals for the District of Columbia.

USDA provides rural water, wastewater funding. The U.S. Department of Agriculture announced an \$891 million appropriation for rural potable water and wastewater improvement projects across the country.

The funds came from the USDA's Water and Waste Disposal Loan and Grant Program.

The recent appropriation funds more than 200 projects, one of which is in Marion County.

Marion will receive \$9.1 million to connect a wastewater system in Ocala East Villas Inc. to the county's central wastewater treatment system.

More RESTORE funding for Florida. Florida's Gulf Coast is slated to get an additional \$73 million in funding derived from Deepwater Horizon damage settlement penalties.

The funds come from the RESTORE



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SWIX

FEDFILE

Continued on Page 13

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Tampa Electric Co. receives regulatory approval to expand solar energy generation

Staff report

The Florida Public Service Commission approved Tampa Electric Co.'s Durance project, the company's latest solar development effort.

The roughly \$69 million project in Polk County is expected to come online in January.

The solar project is anticipated to increase the average residential customer's bill by 44 cents per month.

"These solar projects are a win for our customers and a win for the environment," said Nancy Tower, president and chief executive officer of the Tampa-based utility. "This is safe, renewable energy that benefits all Tampa Electric customers today and for future generations.

These solar projects are a cheaper option for customers than keeping TECO's power-generating fleet running as it is today, she said.

TECO's recent expansion includes five projects with a total generating capacity of 260 megawatts. All phases are scheduled to be completed by January, 2021.

If executed as planned, TECO's \$850 million investment will add six million solar panels over 10 new solar projects creating a total of 600 megawatts of photovoltaic solar energy.

The expansion will generate enough electricity to power more than 100,000 homes.

Upon completion of the current initiative, seven percent of TECO energy generation will be solar, making Tampa Electric the utility with the highest percentage of solar generation in Florida.

Marion County approves permit for solar farm. In October, Marion County Commissioners unanimously approved a special use permit paving the way for the development of a 74.9-megawatt solar farm in the county and the city of Dunnellon.

The owner applicant, Kingston Properties LLC, and agent Renewable Management Services LLC requested the permit to establish the facility within 767 acres under the jurisdiction of the county.

The applicant's total land area includes roughly 1,100 acres bordering the Withlacoochee River.

Marion County staff reported the photovoltaic solar array power generation facility will cover approximately 294 combined city/county acres.

Renewable Management Services proposed to construct the solar power generation facility and then market a long-term lease to a major energy provider in the state.

The site area is rural in character with both agricultural and residential land uses. County staff said the project should have minimal impact on the surrounding land.

Several conditions accompanied the recommendation for approval including typical requirements such as setbacks, fencing and buffers to visually screen the facility, wildlife protections, and a decommissioning plan and schedule.

The county also secured a minimum 30-foot perpetual easement for a multi-use trail extending from Bridges Road and continuing along the northern and eastern boundaries of the property.

DEP, Nature Conservancy acquire the Bluffs of St. Teresa. The Florida Department of Environmental Protection and The Nature Conservancy acquired 17,088 acres of historically significant land including the Bluffs of St. Teresa.

The acquisition will close the gap between Bald Point State Park and Tate's Hell State Forest allowing for the creation of contiguous protected land that includes the Apalachicola National Forest, St. Marks National Wildlife Refuge and the Ochlockonee River State Park.

"The Bluffs is an incredibly important acquisition for the state of Florida, and is the largest fee acquisition approved by the

Board of Trustees in over a decade," said DEP Secretary Noah Valenstein. "Not only does this area connect multiple state parks and federally preserved lands, it also protects estuarine and freshwater resources that make up the economic and ecological lifeblood of the near-shore Gulf."

According to the department, the protection of the Bluffs marks a conservation milestone.

Anticipated benefits include climate change resilience, preservation of rivers and lakes critical to water quality, the quantity and health of the region's aquaculture, and the safeguarding of habitat needed by countless native and migratory species.

The Bluffs of St. Teresa, also called the Dickerson Bay property, includes lakes, wetlands, floodplain swamp, salt marshes and tidal creeks, and includes water frontage along the Gulf of Mexico, Ochlockonee Bay and Ochlockonee River.

The lower wetted lands border upland pine forest, shrub and bog. The area is home to both rare plants and endangered animals.

"The Nature Conservancy worked hand-in-hand with DEP over the course of years to bring this deal to a close, and we committed \$2.25 million to ensure the conservation of this precious jewel," said Temperance Morgan, executive director of The Nature Conservancy in Florida. "Moments like this remind us why we need to band together as one community for the protection of our natural resources, our landscapes and our shared vision for the future."

DEP acquires 578-acre parcel in Gulf County. DEP and the Fish & Wildlife Foundation of Florida purchased 578 acres

of land for conservation in Gulf County. The parcel is within the St. Joe Timberland Florida Forever project in the Apalachicola River and Bay watershed.

The acquisition adds to the state's recent 20,168-acre addition to the Lake Wimico tract.

"This land is one of the most undeveloped, diverse, productive and economically important natural systems in the southeastern U.S.," said DEP Secretary Noah Valenstein. "This acquisition will protect drinking water supplies, preserve the vitality and connectivity of wildlife habitats, and expand public lands access."

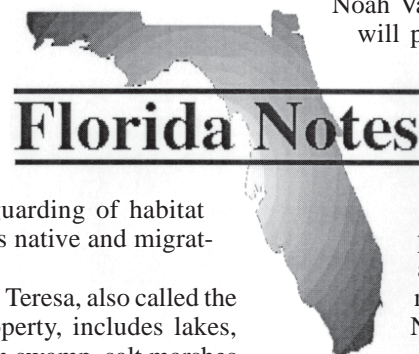
The newly acquired property will provide public access to a large expanse of natural areas throughout North Florida.

DEP officials said the tracts include examples of almost all the natural communities of North and Central Florida, from scrub to swamps and springs.

"The permanent protection of Lake Wimico is a great example of Florida Forever dollars being used to protect numerous aspects of Florida's resources," said Callie DeHaven, director of DEP's Division of State Lands.

"We're proud that we were able to work with our partners to complete this important acquisition and look forward to continuing to build these types of partnerships to acquire additional lands for conservation and recreation," she said.

The project will be managed by FWC as part of the Apalachicola River Wildlife and Environmental Area.



Florida Notes

NOTES
Continued on Page 16

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Miami City Commission passes rules to stop pollution from construction sites

Staff report

The Miami City Commission recently passed ordinances that will hold contractors responsible for any fugitive pollution produced from a construction site that contaminates city waterways.

For the first time, the city can impose fines, issue stop-work orders and take other measures to force contractors to control discharges of sediments and chemicals from construction sites.

Miami City Commission Vice Chairman Ken Russell proposed the fines and chaperoned the new laws through the com-

mission to a unanimous vote in late October.

Those votes occurred against a back-drop of massive fish kills and a die-off of seagrass in Biscayne Bay as a result of persistent heavy rains this summer in South Florida.

Russell was responsible for earlier ordinances passed by the commission related to the environment including banning the use of specified herbicides on city properties, banning fertilizer during the rainy season, banning styrofoam cups in city parks and requiring additional water quality monitoring.

St. Pete Beach begins extensive sewer repairs. The city of St. Pete Beach recently began a force main sewer system overhaul project.

The sewer mains, some more than 60 years old, are under streets. Using horizontal drilling techniques, long segments of new sewer pipes will be installed without removing pavement.

Horizontal drilling will significantly reduce disruptions during construction. Construction will occur in three-to-five block segments to limit the number of areas affected at any one time.

The city has assured local businesses that it will do whatever possible to minimize disruptions during construction activity.

The cost of the entire project is expected to be about \$24 million. The sewer upgrades will cost \$16.6 million.

About \$2 million will come from the state of Florida. About \$8 million to fund electrical line burial comes from a local sales tax, "Penny for Pinellas."

The projects are expected to last about 18 months.

When completed, the sewer collection pipeline upgrades are expected to end sewage overflows that eventually end up in Boca Ciega Bay on the west side of St. Pete Beach.

The work will also increase system capacity to allow for new development in St. Pete Beach.

Homosassa restoration work begins.

An environmental restoration project began in late October along the Homosassa River to remove muck, invasive plants and vegetation debris.

The project is being spearheaded by a local group, Homosassa River Restoration Project Inc.

The lead contractor, Sea and Shoreline Inc., will use a hydraulic dredge to remove living and dead vegetation, muck and sand from the Homosassa.

On land, the sand will be separated from the muck, treated to consolidate it and then returned to the river.

Eelgrass will then be planted on the clean sediment.

The muck and plant debris will be transported off-site.

Work began on the first phase of the three-phase project in October on about five acres of residential canals and coves on an upstream portion of the Homosassa River near Homosassa Springs.

The three phases are expected to be complete by 2025 with the restoration of about 46 acres along the river.

This project is supported by both donations and public funding.

In 2016, the Florida Legislature allocated \$350,000 to pay for planning and permitting. But then-Gov. Rick Scott vetoed the project.

HHRP garnered \$75,000 through donations to continue the project and pay U.S.

Army Corps of Engineers' permitting fees.

In 2019, the Legislature appropriated \$2 million, paid through the Florida Department of Environ-

mental Protection.

In 2020, the Legislature appropriated another \$1.5 million, which the group has not yet received.

Although the path toward this restoration project has not been straight, it's backers cite it as an example of what a persistent local grassroots organization can accomplish.

Lake Okeechobee water level management. During the past year, the U.S. Army Corps of Engineers managed Lake Okeechobee surface water levels without discharges from the lake.

In fact, water levels had been maintained during the unexpected dry season by backflowing water from the C-44 Canal into the lake.

But the backflowing stopped abruptly in October as water levels rose after a summer of heavy rains in South Florida.

The corps is again releasing water from the lake to east and west coastal estuaries.

During the 2018-2019 dry season, the corps drew down Lake Okeechobee's water level, in part to aid repair work on the Herbert Hoover Dike and in part to improve macroalgae density in the lake.

The macroalgae are essential for fish habitat, especially bass.

Although somewhat controversial, the low water maintenance effort was largely successful in promoting macroalgae growth.

With no discharges, microalgae blooms in the Caloosahatchee and St. Lucie rivers were limited. Algal blooms did occur along the Caloosahatchee last year, but those were due primarily to stormwater runoff from within its watershed.

In January, 2020, Lake Okeechobee had a surface water level of 13 feet referenced to the National Geodetic Vertical Datum. By May, it had declined to just below 11 feet NGVD.

By the second half of September, 2020, Lake Okeechobee's surface water level was consistently above 16 feet NGVD, about a foot below the high-water lake management level.

As of this writing, Hurricane Eta is expected to give another drenching to South Florida, requiring additional lake water release.

Dunedin wastewater system improvements. In late October, the Dunedin City Council unanimously authorized the submission of a facilities improvement plan to the Florida Department of Environmental Protection.

The submission is the initial step toward applying for a \$14.8 million low-interest State Revolving Fund loan for construction.

Dunedin's Utilities Department would like to replace seven force mains, as they have reached the end of their useful life.

The iron pipes, placed in service in 1991, are failing due to corrosion. When they break, untreated sewage is likely to flow onto streets, through storm drains and into adjacent surface waters.

Dunedin's experience is similar to that of several other municipal utilities around the Tampa Bay area that are upgrading their



WATCH
Continued on Page 5

Coast Guard, DEP lead Hurricane Sally oil release cleanup on Perdido Key

By **BLANCHE HARDY, PG**

On-scene coordinators from the U.S. Coast Guard and the Florida Department of Environmental Protection recently led cleanup efforts to remove sand containing weathered oil from a half-mile area of Johnson Beach on Perdido Key.

WATCH
From Page 4

wastewater collection systems to improve capacity and reliability.

If Dunedin obtains the SRF loan, its first debt payment would be due in August, 2021, or delayed until six months following completion of construction, whichever is the latest.

The city is in the first stage of completing the force main replacement. Project completion could be three or four years down the road.

The city currently has 17 miles of force mains and more than 140 miles of sanitary sewer mains. Its wastewater utility treats about 4.75 million gallons of sewage a day.

Panama City, DEP reach agreement for fine reduction. Early this year, the Florida Department of Environmental Protection assessed fines against Panama City for 35 different sewage leaks that occurred between 2016 and 2019, 25 of them occurring after Hurricane Michael.

In April, Panama City officials signed a consent agreement with DEP to upgrade their wastewater collection system and treatment plant to meet current operating requirements.

Fines of \$145,000 were imposed in the consent agreement.

In October, DEP agreed to reduce the fines to \$124,000 if the city used the forgiven fines to purchase needed equipment for its wastewater treatment system.

Local officials acknowledged that Hurricane Michael's damage was not the primary cause of the poor performance of the city's wastewater collection and treatment facilities.

Age is the primary cause, as much of the system is between 60 and 80 years old. Many components have greatly exceeded their expected useful lives.

City officials estimate costs of up to \$200 million to completely renovate the wastewater system and bring it up to acceptable standards.

The city negotiated an \$81 million State Revolving Fund loan from DEP and is seeking additional funding from other sources.

The plans are to begin construction in 2021 and complete work within five years. This may be an overly ambitious schedule, but one seen as necessary by city officials.

Lake Beresford stormwater project. The St. Johns River Water Management District awarded a \$278,500 grant to Volusia County to help fund the construction of a stormwater project on Lake Beresford.

Volusia County will match that grant with funds from its stormwater utility tax. The entire project is expected to cost \$557,000.

The funding will be used to pay for a treatment system that will divert stormwater runoff into a wet detention pond, and then through an additional treatment system component before being discharged into the lake.

The treatment system will remove fertilizer-derived plant nutrients, pesticides and oil.

It is expected to remove 211 pounds of total nitrogen and 35 pounds of total phosphorus annually from stormwater runoff.

During the past year, Volusia County purchased property at the northwest edge of the lake for the stormwater project, and hired CDM Smith to design it.

The treatment facility will be located near the junction of Lake Beresford and the St. Johns River.

The project is out for bid and is expected to be completed by the end of next year.

The oil was discovered in September after Hurricane Sally.

Perdido Key is located in the Florida Panhandle between Pensacola and Orange Beach, AL.

Cleanup was conducted along the 16-mile-long key in coordination with the Interior Department's U.S. Fish and Wildlife Service, the National Oceanic & Atmospheric Administration and the National Park Service.

The affected area is culturally significant to federally recognized Native American tribes including the Perdido Bay Tribe of Southeastern Lower Muskogee Creek Indians.

Recovery and restoration efforts in response to hurricanes and other natural disasters depend on coordination between federal, state and local agencies.

"Since Hurricane Sally made landfall, DEP has worked with the Coast Guard to assess the varying degrees of oil affecting the coastline so we could determine the most effective cleanup strategy to protect these coastal ecosystems," said DEP Secretary Noah Valenstein.

Samples of the oily sand collected from the impacted area were sent to the Coast

Guard Marine Safety Laboratory in New London, CT. The Coast Guard is now conducting analyses to identify the source of the oil.

Numerous sunken and overturned vessels were observed after the hurricane and several reports identified the vessels as leaking fuel and other pollutants.

The oil may also contain residue from previous oil spills in the area. Perdido Key beaches were significantly polluted with oil deposits after the 2010 Deepwater Horizon oil well blowout.

The degree of pollution along the beaches was surveyed by a shoreline cleanup assessment team to determine the extent of pollution and to establish acceptable cleanup operations and procedures to reduce impacts.

Coast Guard-directed crews subsequently removed 3,750 pounds of oil and sand.

Best management practices included preventing vehicular and pedestrian traffic from mixing the oil deeper into the sand and manual removal of the oily sand.

"Our engagement with the trustees has been invaluable," said Coast Guard

Hurricane Sally Incident Commander Kelly Thorkilson. "Throughout our response, we've worked closely with our partner agencies to identify environmentally sensitive areas, such as Johnson Beach, and prioritized our response efforts based on reports of pollution in those areas."

The recovery of oil eliminated the pollution threat in a manner that left sensitive habitats intact and increased the ability of reconstitution, said Thorkilson.

Approximately 60 percent of Perdido Key is located in federal or state parks. The area impacted by the oil is located within federally designated critical habitat and marine protection areas.

Perdido Key is home to the endangered Perdido Key beach mouse and provides habitat to other protected species including loggerhead, leatherback, Kemp's ridley and green sea turtles.

The area also provides habitat to numerous shorebirds including the protected piping plover. Additionally, Escambia County's Perdido Key Habitat Conservation Plan protects red knots, snowy plovers, least terns, black skimmers and American oystercatchers.

The Coast Guard received no reports of impacts to wildlife in the Johnson Beach area.

Florida Specifier

2021 Drillers Directory

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Court orders corps to conduct assessment of Lake Okechobee water releases

By ROY LAUGHLIN

For the first time, the U.S. Army Corps of Engineers is required under court order to consider if and how water releases from Lake Okeechobee cause harmful algae blooms downstream that adversely affect endangered species and critical habitat.

The order includes freshwater cyanobacteria blooms and red tide blooms in estuaries.

The corps is specifically tasked to study the effects of water releases from Lake Okeechobee on endangered species including manatees and their critical habitat, and nesting sea turtles. Three bird species are also included in the assessment list.

The environmental assessment's primary focus is the effect of harmful algal blooms, including synergistic effects of red tide and blue-green algae, on nesting sea turtles, piping plovers, wood stork and red knots.

The assessment must also include the effects of seagrass die-off on manatees and how it affects their behavior.

The effect of releases on sea turtle nesting is another required subtopic. A separate clause in the agreement directs the corps to evaluate the effects of the Lake Okeechobee Regulation Schedule regard-

less of the presence of HABs on the species listed.

The assessment's geographical extent was also laid out. It includes the Caloosahatchee River Estuary and the immediate outfall area north to and including Boca Grande and south to and including San Carlos Bay and Matanzas Pass; the Okeechobee Water Way; Lake Okeechobee; the St. Lucie River Estuary and immediate outfall area in Southern Indian River Lagoon north to Hutchinson Island and south to Hobe Sound.

The assessment also includes a study to characterize factors such as hydrology, nutrients, water management and climate responsible for harmful algae blooms in Lake Okeechobee and its drainage rivers and estuaries.

The corps must complete its assessment within 90 days following Oct. 28, 2020. Subsequently, the draft assessment will be sent to the U.S. Fish and Wildlife Service for consultation.

By the end of one year, the environmental groups who initiated the court case will have a final consultation to determine if the assessment meets the court-ordered requirements.

If not, the complaint of noncompliance may go to the judge for another hearing.

The agreement specifically precludes

the plaintiffs from seeking a contempt of court hearing if the two parties do not agree.

During what will likely be most of a year of assessment preparation and consultation, the court order required that the corps use Florida's weekly HAB monitoring reports and to link Florida's reports to a website used by the corps to present the progress of the assessment and consultation effort.

In addition to requiring the usual use of best available scientific information, the court order specifically outlined the sources of, and allows the use of, data from ongoing studies. These sources and data will be specifically identified in the environmental assessment.

So much HAB research is occurring both in Florida and nationally that considering it and identifying it by reference in the assessment seems defensible.

This assessment agreement came about through a joint filing by the Center for Biological Diversity, the Calusa Waterkeeper and the Waterkeeper Alliance.

The groups filed a case against the corps and three other federal agencies in 2018 following the most recent and exceptionally prolonged and severe regional HABs.

That year, the blooms began in late

spring with a blue-green algae bloom that spread from Lake Okeechobee.

Later that summer, a massive red tide on Florida's western coast spread to the state's eastern coast.

Extensive fish and wildlife mortality occurred in both fresh and salt waters as a result.

Judge Donald M. Middlebrooks of the U.S. District Court for the Southern District of Florida released the court order, Case No. 2:19-cv-14199-MIDDLEBROOKS, on Oct. 26.

The Calusa Waterkeeper's public statement after the decision noted that a biological assessment would be undertaken looking into how harmful algae and their toxins—like beta-methylamino-L-alanine—would affect species such as manatees, sea turtle and other federally listed plants and animals impacted by the lake's discharges.

"This is an important step in setting precedent ... to avoid environmental disasters such as those we experienced in our estuaries in 2016 and 2018," said John Cassani, the Calusa Riverkeeper, in summing up the significance of the court decision in their favor.

The Calusa Waterkeeper characterized the case's outcome as a "victory for the people and wildlife of South Florida."

Jacqueline Lopez, Esq., Florida director and a senior attorney for the Center for Biological Diversity who represented the two Waterkeeper organizations, noted the two most significant results.

"First, we now have a court order that finds water discharges influence harmful algal blooms and the corps has the ability to do something about it," she said.

Second, the decision requires the corps to collect environmental information and publish it on its website.

The order will remain in effect as the corps and the South Florida Water Management District complete construction of water conveyance projects in the Everglades restoration plan.

This decision will influence the operation of water releases from Lake Okeechobee through them as well.

The decision announced just before the November general election, was buried in the news cycle's election coverage and speculation.

Even if unnoticed in late October, it is an important new influence on Lake Okeechobee water discharges that may be finalized as early as the 2021-2022 wet season in South Florida.

It could help improve the environmental outcomes of flood control water releases from Lake Okeechobee.

Preparation for HAB mitigation underway

Staff report

In anticipation of harmful discharges released from Lake Okeechobee to the Caloosahatchee and St. Lucie estuaries, the Florida Department of Environmental Protection and the South Florida Water Management District are preparing for the use of innovative technology to mitigate blue-green algae, if needed, following the recent announcement by the U.S. Army Corps of Engineers.

In fiscal year 2019-2020, \$10 million was appropriated for innovative technologies to combat harmful algal blooms.

DEP's Office of Water Policy and Ecosystem Project's Innovative Grant Program facilitated the allocation of this funding following recommendations made by the state's Blue-Green Algae Task Force.

The recommendations included investing in a portfolio of technologies to prevent, detect and address harmful algal blooms in a cost-effective, environmentally safe and scalable fashion.

One of grants awarded was for \$1.7 million to the St. Johns River Water Management District to evaluate the application of a hydrogen peroxide-based algicide to prevent bloom formation.

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FSU to relocate low-level radioactive waste from two research disposal sites

By ROY LAUGHLIN

In October, Florida State University officials announced that they will excavate and relocate low-level radioactive waste from two disposal sites.

The smaller of the two sites is at the FAMU-FSU College of Engineering in Innovation Park. The larger of the two sites occupies an isolated plot of land less than an acre in size in the Apalachicola National Forest.

The radioactive waste originated primarily from the university's biological research. The waste contains radioactive isotopes of hydrogen, tritium, carbon, carbon-14 and perhaps radioactive isotopes of calcium, phosphorus or sulfur.

The radioisotopes emit beta or, in the case of phosphorus, "soft" gamma rays.

Radioactively contaminated materials could include plant and animal tissue or cells; food; water; protective clothing such

as gowns, gloves and masks; laboratory instruments including pipettes glassware, and plasticware; and other incidental laboratory supplies such as paper towels and counter covers.

Liquid scintillation fluid in jars and vials, and barrels of pooled spent samples are likely the largest material types in the disposal landfills.

Laboratory experiments usually involve the use of millicurie amounts of radioisotopes in an entire experiment. Carbon-14 is the isotope with the longest half-life among those typically used in biological experiments.

According to information available from FSU, the two sites were used in succession.

The Innovation Park site is on a plot of land 25 feet by 25 feet. Wastes were buried to a depth of eight feet. The site received wastes from 1958 to 1964, and is now covered with a concrete slab.

Subsequently, FSU established a larger low-level radioactive waste disposal site about 20 miles away from the campus in Apalachicola National Forest.

University researchers transported wastes there between 1966 and 1979.

The Apalachicola National Forest site was permitted by the U.S. Forest Service and had the approval of the Florida Department of Health.

Site photos do not indicate any sort of covering for the ground over the approximate quarter acre where wastes were buried inside two fences.

This site contains 26 separate disposal cells below ground.

Waste was disposed of in 55-gallon steel drums, five-gallon cans, glass and plastic jars, cardboard boxes, wooden boxes and plastic bags.

Neither the Innovation Park site nor the Apalachicola National Forest site has a subterranean liner between it and groundwater.

The Apalachicola National Forest site has been monitored regularly since it was closed in 1979.

Recent monitoring showed that the containers of liquid wastes had been breached. Some radioisotopes were found

in plumes of groundwater.

Dioxane, a carcinogen and a component of scintillation fluids 50 to 60 years ago, was also found.

Scintillation fluids of that era were primarily low molecular weight petroleum hydrocarbons, with a composition similar to kerosene or gasoline. Those may also be leaking but were not mentioned in contamination reports.

The nearest drinking water well is 2.5 miles from the Apalachicola National Forest disposal site. According to reports, there's no human exposure to any contamination that has leaked up to this point.

FSU and its consultants have worked for a year on a cleanup plan that involves removing all the wastes from both sites.

Materials and soil excavated and solidified on-site will be moved to another disposal site that meets current long-term disposal standards.

The cleanup could cost as much as \$7 million, according to media accounts.

In November, the Forest Service released its cleanup plan for public comment and kept it open for 30 days.

After evaluating comments, cleanup at that site could commence early next year and will likely be completed within a year.

DEP forms stormwater committee to help implement Clean Waterways Act

By ROY LAUGHLIN

The Clean Waterways Act passed by the 2020 Florida Legislature mandated major changes in all categories of water management that affect surface water quality. Stormwater management was included as one of four categories to undergo major revisions.

If progress so far is any indication, Florida's stormwater management practices will change substantially as a result of the new law.

The Florida Department of Environmental Protection has already formulated some proposals that were discussed in public webinars over the summer.

During those webinars, DEP staff outlined possible changes to the environmental resource permit program related to water utilities.

DEP currently allows a general permit for stormwater management systems on sites less than 10 acres in size that have less than two acres of impervious surface.

DEP has identified several problems with the current practice.

First, contractors sometimes apply for the wrong permit. Second, the permit area in question is sometimes part of a larger development, violating the minimum area provision. And finally, sufficient information for the department to be able to verify adequate water quality treatment is sometimes lacking from permit applications.

Consequently, the department is considering asking contractors to submit a permit application 30 days before beginning construction. The current rule allows a 30-day window before or after construction starts.

Other provisions up for consideration, include the establishment of fixed, specific credits for developments with low impact infrastructure; increased removal requirements; a more specific definition of "net improvement," and others that are more narrative than measurable.

DEP appointed a 13-member Technical Advisory Committee in November, marking a significant milestone toward implementing Clean Waterway Act requirements.

The establishment of a TAC was one of the suggestions attributable, at least partially, to the Florida Audubon Society, in a letter to DEP Secretary Noah Valenstein from Julie Wraithmell, executive director of Florida Audubon.

"An important role for the TAC would be to review the draft handbook created in 2010 during a similar rulemaking effort (though neither the rule nor the revised handbook was adopted)," she wrote. "The process should include an analysis of results from areas like Alachua, Brevard and Pinellas counties that have implemented some of the recommendations from the 2010 process.

"Additionally, the TAC should consider new research and changes in our under-

standing of stormwater issues since the previous effort, as well as new technologies that may add tools to the stormwater toolbox."

The 13 members come from academia, business, consulting, utilities, homebuilder associations, national conservation associations and the Florida Stormwater Association.

The inclusion of the Florida Stormwater Association on the TAC is significant.

As Wraithmell mentioned in her letter, a draft stormwater manual was prepared in 2010 but never formally approved. Several of its provisions have been implemented by some utilities.

In the meantime, FSA prepared a stormwater manual for its members and has updated the manual on an approximate biennial schedule.

If DEP finally issues a stormwater manual, FSA brings a decade of experience to bear on the task.

Notably lacking on the committee are technical experts on springs, for example, from the Florida Springs Council. Experts from Riverkeeper organizations and regional environmental advocacy organizations are also absent.

As of mid-November, no TAC meetings had been scheduled.

The committee seems to have the expertise needed to finish the task of creating a competent stormwater manual. Perhaps this time, the technical side of the effort will prevail and Florida will finally get an effective stormwater manual.



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Seven tips to help gas station owners prevent leaks, comply with 40 CFR 280

By DAN JENKINS

Short of a fueling station blowing up or catching on fire, there is nothing worse for station owners than a release of fuel into the public drinking water supply. Although it is very infrequent, it does happen.

So, to minimize the chances of a release, it's best for everyone involved to stay aggressive and encourage best preventative maintenance practices.

This is particularly true in today's environment with the advent of new fuels that have not been fully demonstrated to perform against corrosion in both new and old tank equipment.

There is a saying amongst accident investigators that "small problems turn into big problem and small corrosion spots can turn into corrosion holes."

We have compiled a list of seven tips to help regulators and environmental firms identify and correct common corrosion issues, all of which are directly or indirectly related to water intrusion and many are found in the latest version of 40 CFR 280.

For reference purposes, we have taken some meaningful text from both the U.S.

Environmental Protection Agency Office of Underground Storage Tanks website and specific language from the standard itself to aid those tasked with risk avoidance.

When a test or inspection occurs, owners and operators may find problems with a UST system. When a problem is found, owners and operators must repair it to remain in compliance with the final UST regulation.

Section 280.33 of the final UST regulation describes repair requirements for UST systems. Periodic operation and maintenance walk-through inspections must be completed to properly operate and maintain UST systems.

Not later than Oct. 13, 2018, owners and operators must have met one of the following: Conducted a walk-through inspection that, at a minimum, checks the equipment every 30 days. (Exception: spill prevention equipment at UST systems receiving deliveries at intervals greater than every 30 days may be checked prior to each delivery.)

Spill prevention equipment must be visually checked for damage, and liquid or debris removed. The measurement of any water level in the bottom of the tank

must be made to the nearest one eighth of an inch at least once a month.

Owners and operators of UST systems must report to the implementing agency within 24 hours, or other reasonable period specified by the agency, and follow the procedures in section 280.52 for any unusual operating conditions observed by owners and operators, such as unexplained presence of water in the tank.

Tip #1: Understand the definition of damage

The 40 CFR 280 standard states that owners must check for damage, but does not define what damage is—only if the equipment isn't working properly and is in need of repair. Also, the standard does not identify a measurement for corrosion; it left it up to owners and inspectors to make that call.

A good rule of thumb for this was eloquently explained by Federal Judge Potter Stewart as he attempted to explain "hard-core" pornography, or what is obscene. Potter said: "I shall not today attempt further to define the kinds of material I understand to be embraced ... but I know it when I see it."

Tip #2: Connect with inspectors

State departments of agriculture are important because their inspectors conduct tests for both free water and suspended water under the standard written by National Institute of Standards and Technology Handbook 130.

This procedure calls for an inspector to execute a test that draws fuel from the tank and inspect it for clarity. If the fuel is not clear, it is primarily due to suspended water.

Suspended water causes corrosion problems to the tank, internal parts, piping and risers, both in steel and fiber-reinforced plastic tanks.

When regulators and environmental professionals identify stations with tanks that repeatedly fail these visual tests, it makes sense to dig a little deeper.

Tip #3: Dig deeper into alarms caused by free water

While many contractors and station owners report all the alarms for high water level that go off, it's a good practice for regulators to investigate why such alarms do go off.

40 CFR 280.50 requires that station owners explain the presence of excessive free water in the tank.

Remember, if water can get into a tank, there's a good chance that fuel can be released from it.

Seeing a VAC truck at a gas station is a warning sign of water problems.

Tip #4: Excess water in sumps

Section 280.36 states that sumps and spill bucket containers must have liquid removed and, if one digs deeper into the EPA OUST writings, they imply that spill containers must be free of liquid.

Inspectors should attempt to determine what percentage is water and what percentage is fuel. Is there damage to the lid or receptacle? Was the lid improperly installed? Is there a crack in the lining? Or does the situation call simply for water blocking agents?

Whatever the problem, regulators and environmental professionals should do their best to help station owners correct the problem.

Tip #5: Excess water in spill buckets

As with Tip #4, excess water in spill buckets leads to problems. The same goes for inspection and installation of lids. However, this tip introduces the new dynamic of delivery drivers.

While the majority of drivers are professional, there are always a few bad apples who do not put lids on correctly or allow water to enter into openings.

While these drivers are regulated under the Department of Transportation, it's wise to find and interact with all delivery drivers and educate them on the importance of keeping tanks and containment devices free of water.

Tip #6: Avoid paint, coatings in sumps

While it is perfectly legal for contractors to repaint turbine motors and piping, there can be problems with paint in containment sumps.

Paint can cover corrosion making proper inspection difficult. Also, paint can crack allowing water to creep under the paint producing more corrosion.

Paint can make fasteners difficult to remove, requiring more powerful tools that can create safety hazards. This is particularly true in emergencies.

Paint has difficulty adhering to comprised surfaces, often leading to peeling. In addition, paint often requires a super clean surface to adhere.

Sumps covered up by paint and its peeling are not good!

Tip #7: Used fuel filters

While inspectors typically do not go this far, it might be wise to investigate the used filter bin, particularly if the station has history of alarms, repairs and fuel quality issues.

The inside guts of filters can tell you if rust is being collected by the filter. If so, that is a warning sign of component wear.

Filters with a lot of sludge may be a sign that water is present. Excessive sludge can lead to corrosion hot spots.

If there is water in the tank but the station is only using particulate filters, that's a sign that the tanks may be transferring water to cars filling up—never a good thing for consumers.

In summary, water intrusion in fuel systems in all phases—free water, suspended water and vapor—can cause significant damage to fuel systems and lead to a release.

Pay attention to water and act early and often when you see it. Ben Franklin said it best: "An ounce of prevention is worth a pound of cure."

Dan Jenkins is an accident prevention specialist for Steel Camel in Tampa.



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Environmental advocacy groups already planning for the next four years

By ROY LAUGHLIN

In early November as national election voting was still being tallied in six swing states, a consortium of environmental advocacy groups conducted an online meeting to lay out their vision for the next four years of a Biden administration.

Gene Karpinski, president of the League of Conservation Voters, led a panel discussion with representatives from a broad group of advocacy organizations with overlapping but not identical missions.

Representatives of each group explained their interests in the election's outcome, the expectations of their membership, and the specific environmental policies and practices they hope to see enacted during the Biden administration.

As a group, the panel expects the new administration to assertively implement policy and practice changes to mitigate the impacts of climate change.

Michael Brune, executive director of the Sierra Club, said the issues of climate change and clean energy should be considered in every appropriate legislative vehicle. Such efforts include moving forward to end fossil fuel leases on federal public lands.

The panelists unanimously voiced support for the U.S. to reassert its leadership on a global scale for climate change issues and biological diversity preservation.

The discussion illuminated the importance of mitigating climate change's adverse effects by noting that it is one of the major crises now facing the U.S. It ranks near the top, along with managing the pandemic and economic recovery.

On the political side, one meeting participant asserted that election exit polls did not show climate change to be among the top 10 issues to be addressed, and therefore advocates were simply "making things up," a charge trumpeted by the outgoing president.

Joe Bonfiglio, president of EDF Action, said that EDF's interest in climate change was not based on exit polls. He said that it was based on the view of voters who supported the Biden-Harris ticket.

Seventy percent of that group, a substantial majority of voters, ranked climate change among the top issues.

Gina McCarthy, former U.S. Environmental Protection Agency administrator during President Obama's second term, said that science must be restored to the EPA and other federal resource agencies.

McCarthy received at least one query about whom she would prefer to see as the new EPA administrator. As anyone who has listened to her in the past would expect, she deftly deferred, saying there was no shortage of qualified candidates.

The people selected for key environmental agency positions, she said, don't have to be scientists—but they should understand that they represent the mission of their agency and have responsibility to the public.

In the second category of priority, the panel endorsed actions on toxic substances including per- and polyfluoroalkyl substances. The Trump administration has promised action on PFAS but has been slow to deliver.

Expect more results under the watchful eyes of the environmental community that will have a closer view of what the EPA and the U.S. Department of Defense will be doing to clean up PFAS contamination across the country.

Replacing lead pipes and plumbing was another topic on the list of issues that the federal government should lean into, according to panelists.

This is an issue that overlaps environmental justice, another important interest of Biden-Harris supporters.

Lower socioeconomic community members bear the brunt of climate change and contamination impacts. Expect more attention to be paid to their issues over the

next four years.

As panel members discussed their priorities, some listeners challenged their prospects for success. The discussion rapidly moved among panel members who made succinct responses about realistic expectations. To summarize, the panelists understand that nothing in politics is permanent.

Karpinski noted that policy is the key to practice and, in practice, both Republicans and Democrats will support policies when they have vested interests in certain outcomes.

For example, if the growing clean energy industry can provide good, high-paying jobs, local officials and members of Congress are likely to buy into it.

Younger voters that understand the existential threat of climate change are becoming a larger component of the electorate. And their numbers will continue to increase.

Bonfiglio noted that his group had worked intensively in six state races for

governor and other down-ballot initiatives. That included Florida—but to a lesser extent than other states such as Colorado. Some of those elected legislators, he said, will take leading roles in promoting environmental issues in Congress.

The 2020 elections are not over. EDF Action expects to expend additional resources in the two Senate races in Georgia, which will be decided in runoff races in early January.

This short article reflects the highlights of environmental advocates' ideas to help reverse the Trump administration's carnage of environmental protections over the past four years.

Humankind still faces a deadline in about 15 years to limit carbon emissions to the atmosphere, after which nothing humans are likely to do will reverse the effects of climate change.

The advocacy groups represented are ready for this challenge and the Biden administration, they say, is allied with them in the struggle.



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Coalition of environmental association professionals formed to address petroleum cleanup program pause

By STEVE HILFIKER

The Florida Ground Water Association is coordinating a nonexclusive, informal coalition of seven Florida environmental industry associations in response to the “pause” in funding for the Florida Department of Environmental Protection’s Petroleum Restoration Program.

The coalition’s goals are to cooperatively share ideas and develop a unified response to Florida government officials regarding the reduced PRP funding budgets for this fiscal year and next, announced Sept. 23 and Oct. 15.

The halt in work substantially damages hundreds of businesses that are vital to the state’s economy, and perpetuates groundwater contamination that impacts our drinking water reserves.

The coalition is presenting publicly available data, reviewed by PRP industry veterans, in requesting the department to resume its normal PRP operations as soon as possible.

The coalition consists of members from the Florida Ground Water Association, Environmental Professionals of Florida, the Florida Association of Professional Geologists, the Florida Engineering Society, the American Council of Engineering Companies of Florida, the Florida Independent Petroleum Producers Association and the Florida Brown-fields Association.

The immediate priorities of the coalition are to have the pause lifted as soon as possible to allow PRP operations to return as close to FY 2019-2020 production levels as possible, and to educate lawmakers on the program’s importance in order to maintain consistent program funding levels for FY 2021-2022 and beyond.

This is a nonexclusive coalition. Any PRP stakeholder can join any of the seven associations to have their voice heard. We encourage public and private sector participation. Any employee of any agency, contractor, subcontractor, well driller, laboratory, remedial equipment vendor, property owner, lender, developer or professional service industry that has an interest in the program can join any or all of the associations.

It is considered an informal coalition because there is no officially registered organization. We are a group of environmental industry professionals sharing ideas and coordinating efforts to protect the economy and environment in Florida.

Each association has selected up to two representatives to lead their group in coalition activities. We ask members of the associations involved to share their viewpoints with their coalition representatives.

The coalition of association leaders will meet to discuss information gathered through their members from the state Department of Revenue, DEP and other government sources. The leaders participate in weekly video teleconferences to discuss documents prepared by coalition members in response to the work slowdown.

Coalition leaders have conducted several video teleconferences with DEP leaders, senators, representatives and stakeholder associations, including the Florida Bankers Association.

Additional meetings are planned and will continue through the 2021 Florida legislative session.

Coalition leaders cordially emphasize in each meeting that our purpose is to lend cooperative support and suggest practical solutions in an effort to save jobs, continue the economic benefits of the program and protect the environment.

After these teleconferences and meetings, information is presented by the leaders of each association to their membership. The weekly Zoom meetings are open to coalition-association members for further collaboration.

We are developing an email database of members, forming committees and subcommittees to address various topics, and have developed a Google platform to work simultaneously on Excel and Word documents that we utilize in our effort to lift the pause and assist our lobbyists as we seek the restoration of full funding to the PRP for FY 2021-2022.

The coalition includes at least five registered lobbyists and numerous former DEP officials to review data, secure appointments and promote our information. Most of the association leaders are industry veterans with decades of experience with the PRP. These professionals have been tremendously helpful to the coalition.

The coalition has written letters to Gov. Ron DeSantis and a number of Senate and House lawmakers regarding this issue.

In addition, we prepared fact sheets and “call to action” letters for each association to use as desired. The confidential PRP survey presented in this issue of the *Specifier* originated through the coalition. And we are developing a list of impacted development projects and real estate transactions that affect site owners, developers and lenders in hopes of providing them relief.

We believe the solutions presented by the coalition are feasible and practical, and we are pleased with the cooperative tone expressed by Florida government officials when we volunteer our support.

At the time of writing, we have submitted questions, documents and spreadsheets that were prepared and reviewed by the coalition to DEP officials, legislators and the governor’s office. We believe the information presented to be accurate, and we are seeking verification. If confirmed, we hope the information will help improve the PRP budget for this year and every year until all eligible sites have attained site rehabilitation completion orders.

Many of our questions are designed to determine why the pause in PRP work continues. The information we have reviewed, after factoring in the requested budget reductions associated with COVID-related revenue shortfalls, indicates that the pause could be lifted, or at least this year’s budget could be improved.

Letter to the Editor

Long-time ‘Friend of the *Specifier*’ responds to last issues’ Biden endorsement

Dear Mike:

I have had the pleasure of knowing you for a long time so I really found it surprising to see that you would publish such a damning column about President Trump in your periodical.

I could have understood you saying that you believe it is in the best interest of the environmental community to vote for Joe Biden and simply left it at that but to basically tell Trump supporters that we are idiots for voting for Donald Trump is not the way to treat a customer.

I personally have made it a policy not to discuss politics or religion with clients because I feel that each individual person has a different situation in life that will dictate what is best for them politically and religiously.

I personally have to weigh what is best for my business and be environmentally conscious. Over the last 35 years of being in business I have seen what our bottom line does under both Democratic and Republican leadership and I can tell you that from our financial history we have always fared far better during a Republican presidency.

Maybe your business has seen an opposite effect that

As we approach the holidays and move into 2021, if the program pause continues, then hundreds of businesses will be faced with personnel layoffs and substantial damage to their operations, up to and including shutting their doors. The industry will face the loss of extensive institutional knowledge of both our unique Florida lithology and PRP operations.

The cost to restart operations will be extensive, with several subcontractor groups, such as drillers, having to ramp up from nothing to again meet the needs of the industry. We are hopeful to achieve workable solutions that will prevent these and related damages before the end of this year.

This has been an annual educational process. We need to continually demonstrate the value of PRP to officials who are not fully aware of the robust program and detailed PRP operating procedures. With more members joining weekly, better organizational structure, increased awareness of our work, job models, new graphics to demonstrate the value of PRP, and ongoing progressive communications with the leaders of Florida government, we envision solutions to not only this issue but to many other environmental issues impacting Florida.

We welcome other Florida associations to join or support our coalition. We intend to address other common environmental issues including population growth, PFAS contamination, springs, Lake Okeechobee, water quality and quantity, and others after the immediate PRP concerns are addressed.

If you are interested in joining or supporting our work, please contact the leadership of any of the seven associations in the coalition.

Steve Hilfiker is co-chair of the Environmental Committee of the Florida Ground Water Association and can be reached at steve@ermi.net.

would cause you to feel the way you do, which I could understand and respect.

Another reason and the main reason I would not consider voting for Biden/Harris is because I believe they are leading the country towards socialism, which as a veteran I have real problem with. I love this country. I respect the American flag. I still believe we are the best country in the world and I believe the American dream is still alive and well. Over the years I have had the opportunity to meet several business professionals who live in socialist countries and they all have said that socialism is not something we would want.

I could go on for pages with rebuttals to the points you made in your opinion column but from the tone of your column I doubt you would respect my point of view, which unfortunately seems to be way most Democrats respond to opposing political views these days.

Best of luck in your future endeavors.

Regards,

Ben Huss
Huss Drilling Inc.

Changes to springs management strategies needed

By TODD KINCAID, PhD

As a hydrogeologist and a lover of Florida’s springs, which I know to be the largest collection of big freshwater springs on Earth, I have long been perplexed by the animosity directed toward spring water bottlers.

Bottled spring water accounts for only about one-half of one percent of the permitted groundwater extractions from the Floridan Aquifer in the Suwannee River Basin (springs country). That’s 2.9 million gallons per day as compared to the 360 million gallons per day permitted for agricultural irrigation.

And, bottling spring water produces none of the toxic nutrient loading that is killing Florida’s springs.

Put another way, if the entire bottled water industry in Florida were shut down tomorrow, there would be no improvement to spring flows or spring water quality.

If, on the other hand, the aquifer water consumed to produce milk (350 to 4,100 gallons per gallon of milk) was no longer extracted and the associated nutrient loading to groundwater was therefore eliminated, we’d see a near-immediate improvement in both spring flows and spring water quality.

Florida’s springs are certainly imperiled. Most are

flowing 30 percent to 50 percent less than their historical averages.

Some springs don’t flow at all except after big storms or abnormally wet periods. Nearly all have become overwhelmed with algae and bacteria due to excessive nutrient pollution.

These problems can be solved. But doing so will require Floridians to understand two truths.

One, nearly every drop of water extracted from the Floridan Aquifer reduces spring flows by an equal amount, regardless of what it’s used for—household tap water, watering lawns, washing cars, growing vegetables or bottling beer, soda, milk, energy drinks or water.

Two, the nutrient pollution that chokes the springs is caused by the overuse of fertilizers, by agribusiness and homeowners alike, as well as by the disposal of insufficiently treated wastewater.

Singling out a particular user such as spring water bottlers is not a solution nor even a step in the right direction.

What is needed are caps on groundwater consumption, set lower than current levels, and dramatic reduc-

KINCAID
Continued on Page 16

**Florida
Specifier**

P.O. Box 2175
Goldenrod, FL 32733

Michael R. Eastman
Publisher/Editor

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

Calendar

December

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

DEC. 7-8 – Course: Backflow Prevention Recertification, City of Altamonte Springs, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 7-11 – Course: 40-hour OSHA HAZWOPER Training Course, University of Florida TREEO Center, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 8 – Course: Wastewater Collection System Cleaning and Maintenance Virtual, TREEO Virtual Learning, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 8-10 – Summit: 2020 Groundwater Summit – A Virtual Event, Online. Presented by the National Ground Water Association. Call (614) 898-7791 or visit www.ngwa.org.

DEC. 9-11 – Course: 24-hour OSHA HAZWOPER Training Course, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 9-11 – Course: Water Distribution Systems Operator Level 1 Training Course, TREEO Virtual Learning, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 10-11 – Course: Backflow Prevention Recertification, Tri County Air Conditioning, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 10-11 – Course: Backflow Prevention Recertification, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 10-11 – Course: Backflow Prevention Recertification, Destin Water Users, Inc., Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 12-20 – Course: Backflow Prevention Assembly Tester Training and Certification, Two consecutive Sat-Sun, 12/12-13 & 12/19-20, D.W. Waters Career Center, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 14-15 – Course: Backflow Prevention Recertification, City of Altamonte Springs, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 15-17 – Course: Process Control of Advanced Waste Treatment Plants, University of Florida TREEO. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

DEC. 30 – Showcase: New Technology & Training Showcase Webinar Series, Online. Presented by the Florida Section of the American Water Works Association's Manufacturers/Associates Council. Call (407) 979-4804 or visit www.fsawwa.org.

January

JAN. 4-8 – Course: Water Class C Certification Review, TREEO Virtual Learning. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 4-8 – Course: Water Class C Certification Review, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

JAN. 9-17 – Course: Backflow Prevention Assembly Tester Training and Certification, D.W. Waters Career Center, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 9-10 – Course: Backflow Prevention Recertification, Bennett Contracting, Bradenton, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 11-13 – Course: Introduction to Electrical Maintenance, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 11-15 – Course: Backflow Prevention Assembly Tester Training and Certification, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 12 – Course: Refresher Training Course for Experienced Solid Waste Spotter – 4 Hour, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 12-13 – Course: Initial Training Course for Transfer Station Operators and Materials Recovery Facilities – 16 Hour, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JAN. 12 – Course: Refresher Training Course for Experienced Solid Waste Operators – 8 Hour, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 12-13 – Course: Refresher Training Course for Experienced Solid Waste Operators 16 Hour, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 12 – Course: Refresher Training Course for Experienced Solid Waste Operators 4 Hour, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 12-14 – Course: Initial Training Course for Landfill Operators and C & D Sites – 24 Hour, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 12 – Course: Initial Training Course for Spotters at Landfills, C & D Sites and Transfer Stations – 8 Hour, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 13 – Course: Refresher Training Course for Experienced Solid Waste Operators, 4 Hour, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 13 – Course: Refresher Training Course for Experienced Solid Waste Operators 8 Hours, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 14-15 – Course: SCADA & Electrical Training: What Utility Staff Need to Know, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 16-23 – Course: Backflow Prevention Assembly Tester Training and Certification, Tri County Air Conditioning, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JAN. 22 – Conference: 30th Annual Southwest Florida Water Resources Conference, Online. Presented by the Florida Section of the American Water Resources Association. For complete information, visit <https://awraflorida.org>.

JAN. 25-27 – Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 25-29 – Course: Wastewater Class C Certification Review, TREEO Virtual Learning. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

JAN. 25-28 – Course: Backflow Prevention Assembly Tester Training and Certification, CW Wood Plumbing Company, Jacksonville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 25-29 – Course: Wastewater Class C Certification Review, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 26-28 – Summit: Virtual WASTECON – Embracing Disruption, Online. Presented by the Solid Waste Association of North America. Call 1-800-467-9262 or visit <https://swana.org>.

JAN. 28-29 – Course: Backflow Prevention Recertification, Bayfront Plumbing Inc., Pensacola, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 28-29 – Course: Asbestos - Management Planner, University of Florida TREEO, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

JAN. 30-31 – Course: Backflow Prevention Recertification, D.W. Waters Career Center, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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Shift to biosolids testing improves results of COVID-19 community surveillance

By ROY LAUGHLIN

During COVID-19's first and second waves, wastewater sampling and analysis emerged as a highly reliable method for assessing the presence of the virus within a community.

Wastewater sampling from a specific residential building could provide a clear indication of where even asymptomatic carriers were living.

It was also a correlating source of COVID-19 data about infection rates determined through human testing programs.

The earliest surveillance methods used throughout the summer focused on wastewater—but not necessarily its biosolids.

Dr. Ian Pepper's laboratory at the University of Arizona was one of the first labs to widely use COVID-19 occurrence in wastewater for community surveillance of the pandemic's spread.

Pepper is a professor in the Community, Environment, and Policy Department in the UA College of Public Health, as well as professor in the university's Department of Agricultural & Biosystems Engineering.

He took samples from more than 300 wastewater systems across the country to establish the benchmark effectiveness of "wastewater epidemiology."

More recently, Pepper and other re-

search groups turned their attention to the analysis of COVID-19 in biosolids.

The disposal of biosolids after wastewater treatment through land application and in open landfills produced other possible transmission routes to be considered.

Early experience with biosolids testing protocols gave insight into focusing on biosolids rather than wastewater for surveillance testing.

Biosolids returned up to 10,000 times more recoverable virus particles than liquids in the same wastewater samples.

Biosolids analysis requires a different sample preparation procedure from that used for water. It requires different reagents and is more efficient. Those characteristics give it an advantage in surveillance sampling.

By late August, Pepper's lab was analyzing wastewater biosolid samples from individual dorms on his college campus.

One highlight of the sampling was the discovery of the COVID-19 virus in wastewater samples from a dorm where only two asymptomatic students lived.

University officials were able to isolate the students to prevent further spread of the virus from the two infected individuals.

Where sensitivity is the key to success,

analyzing biosolids in wastewater rather than the wastewater itself is emerging as the method of choice.

Jacksonville's experience

Analyzing biosolids from the city of Jacksonville's wastewater system solved the COVID-19 surveillance paradox from last spring.

Jacksonville was one of the early participants in Pepper's work. During the spring and early summer, staff from JEA sent 36 wastewater samples to Pepper's lab for COVID-19 analysis. Only four of those showed even a trace of COVID-19.

But the city had experience widespread COVID-19 cases among its residents. JEA staff expected their samples to have COVID-19 signatures similar to those of other cities with significant pandemic conditions present among its residents.

The anomalous lack of positive COVID-19 samples was in stark contrast to data from other cities around the rest of the country.

JEA was forced to take a break from submitting wastewater samples early last summer due to the lack of available laboratory reagents.

Later in the summer, Pepper's lab, JEA staff and a consultant working with them took a fresh approach to using wastewater samples for COVID-19 surveillance.

This time they analyzed biosolids. As in other tests, the biosolids analysis provided a COVID-19 signature significantly greater than water analysis.

Jacksonville's wastewater samples are no longer an outlier for COVID-19 surveillance, as long as biosolids are the subject of analysis rather than wastewater.

Supreme Court set to hear Florida's case in Florida-Georgia water dispute, again

By BLANCHE HARDY, PG

In early October, the U.S. Supreme Court decided to hear Florida's decades-long water rights case against the state of Georgia. A firm date, however, was not set for opening oral ar-

guments.

The Supreme Court initially heard arguments in the case in 2018 and decided to send the case to arbitration under a Special Master.

Florida and Georgia have spent years in mediation without reaching a compromise for the equitable apportionment of surface water in the Apalachicola-Chattahoochee-Flint river basin.

Florida now proceeds to the Supreme Court again with two previous strikes against it rendered by Special Masters.

Judge Paul J. Kelly, Jr., the second Special Master appointed by the court in the Florida v. Georgia Water War recommended denying Florida's request late in 2019.

The previous Special Master, Ralph Lancaster, Jr., conducted pre-trial proceedings and oversaw a related trial. He, too, recommended the court deny Florida's request for relief.

The Supreme Court directed Florida to clearly demonstrate that the requested apportionment substantially outweighs the harm that might result.

Special Master Judge Kelly, Jr., said that the complaining state must show "some real and substantial injury or damage."

This same issue is expected to be front and center in the upcoming action.

Judge Kelly recommended against Florida stating: "Given my factual findings, I recommend denying Florida's request for a decree because it has not proved the elements necessary to obtain relief. Florida has pointed to harm in the oyster fishery collapse, but I do not find that Georgia caused that harm by clear and convincing evidence."

One of the keys to the Special Master's position is the non-drought condition of the Apalachicola River and Bay.


"I note that Florida has not provided any evidence of harm during years with normal or more than normal rainfall," Kelley said. Georgia highlighted this fact on remand.

Georgia attorneys claim the collapse of Florida's oyster fisheries was caused by mismanagement of the resource.

They concur that Florida's oyster fisheries have sustained significant harm, but claim that the harm was caused by drought and the subsequent low flow of fresh water into the river and bay, not as a result of Georgia's over consumption of surface water.

Florida must forcefully address these findings of the Special Master and provide convincing evidence that the increasing diversion of water to supply Atlanta and other upstream uses are indeed a detriment and the primary source of harm to the Apalachicola-Chattahoochee-Flint river basin including Apalachicola Bay.

The makeup of the Supreme Court that will hear these latest arguments substantially changed with the retirement of Justice Anthony Kennedy and the death of Justice Ruth Bader Ginsburg—both replaced with conservative judges.



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<https://pfasforum.org>

Compact issues report on financial benefits of addressing climate change

By **BLANCHE HARDY, PG**

The Southeast Florida Regional Climate Change Compact released a new report describing the potentially devastating financial impacts of climate change in the region.

The compact is a partnership between Broward, Miami-Dade, Monroe and Palm Beach counties to collaboratively work to reduce regional greenhouse gas emissions, implement adaptation strategies and build climate resilience across Southeast Florida.

The compact's report, "The Business Case for Resilience in Southeast Florida, Regional Economic Benefits of Climate Adaptation," opened with the statement: "More than \$4.2 billion in property value could be lost due to daily tidal inundation by 2040."

The report was developed for the compact by the Urban Land Institute with technical support provided by AECOM's Sustainable Economics Practice.

"For Broward County, the report reinforces the importance of taking this type of analysis to the next level with the county's forthcoming investment in a county-wide resilience plan as the basis for organized infrastructure improvements and redevelopment strategies to address future flood risk," said Jennifer Jurado, PhD, deputy director and chief resilience officer in Broward County's Environmental Protection and Growth Management Department.

The report detailed a number of recommendations including the importance of improving climate risk awareness outreach to citizens and businesses, investment in workforce development and engagement with key economic sectors, she said.

The report provided a foundation for the next steps in resilience planning, communications and investments.

ULI, the compact, local business and

FEDFILE

From Page 2

Act administered by the Gulf Coast States Council. Water quality improvement projects meant to benefit human health and the environment fall under the umbrella of restoration projects.

The funds may also be used for coastal vulnerability assessment, land acquisition associated with Florida Forever, stormwater management and septic system improvements.

This most recent RESTORE funding brings the total to \$221 million for the state.

Beginning Nov. 16, Florida will open a 60-day comment period on projects supported by the RESTORE funding. The money is expected to begin flowing early next year.

Jacksonville Superfund site closed.

The EPA and its contractors recently finished cleanup work on Jacksonville's Fairfax Street Wood Treaters site and removed it from the Superfund's National Priorities List.

It is one of 82 sites the EPA has closed and removed from the NPL over the past four years. A total of 27 of those sites were removed in 2020 alone.

The closed Wood Treaters site was originally placed on the agency's NPL list in 2011. The site is surrounded by predominantly residential neighborhoods in Jacksonville.

The plant treated lumber using chromated copper arsenate. Soil and groundwater at the facility site were significantly contaminated. Arsenic was of particular concern.

According to the agency, the site was cleaned up in seven months, much faster than initially expected. The cleanup was originally scheduled to take up to two years.

The restored site is now available for redevelopment.

UCF snags grant. A team of students from the University of Central Florida received a \$75,000 EPA grant to develop an electrochemically modified carbon screen-

nonprofits are partnering to evaluate the economic impact of investment in resilience in the region.

The report presented estimates of potential economic consequences to regional coastal communities if local governments and business communities take no action to address the impacts from tidal flooding and frequent storms considering sea-level rise.

The compact's region covers 6,055 square miles, ranging in average elevation from 4.8 feet to 20 feet above sea level.

Highlighted findings in the immediate future include potential adverse effects on 720 jobs and the loss of \$28 million in sales, property and tourism tax due to permanent sea level rise by 2040.

In the same time frame, \$3.2 billion in property damage and \$1.8 billion in sales and tourism tax losses could result from a single 10-year storm tide event.

In the longer term, taking no action could result in the loss of \$53.6 billion in property values, affect 17,800 jobs and cause \$384 million in fiscal losses within 50 years.

The report noted that over 294,000 properties and nearly 500 miles of major roadways could be affected by a 10-year storm tide event in 2070.

However, with actions planned by the compact, economic modeling found climate adaptation measures offer a significant return on investment for the region, protecting communities, jobs and properties.

Community-wide adaptation could result in \$37.9 billion in regional economic benefits supporting 85,000 job-years while building-level adaptation can offer \$17.6 billion in economic benefits supporting 56,000 job-years.

For every dollar invested in community-wide adaptation strategies, the region will see about two dollars in benefit, and

printed sensor that will accurately measure trace levels of lead in drinking water as it flows from the faucet.

The sensor is a novel electrochemical biopolymer. The students hope it will greatly improve monitoring for trace lead contamination derived from plumbing fixtures in household drinking water.

The team already completed a Phase 1 feasibility study supported by a \$15,000 grant from EPA.

The \$75,000 in Phase 2 funding could put the initially successful demonstration much closer to a technology that can be widely applied in the field.

The funding was provided by the EPA's People, Prosperity and the Planet grant program. The UCF team was one of eight undergraduate and graduate student teams to receive the award.

The research projects selected focus on innovative efforts addressing environmental and public health. The grant funding lasts for one academic year, according to EPA information about the program.

Clean Diesel Program grants. In fiscal year 2020, two Florida counties will receive a total of \$2,639,500 for clean diesel projects.

In the past, Miami-Dade County has dominated the recipient list among Florida's grantees, and this year is no different.

The Miami-Dade County Department of Solid Waste Management is slated to receive \$1,852,500 to help fund the replacement of 23 automated garbage side loaders and two tractor trucks used for waste pickup.

Ocala will receive \$777,000, which will be used to replace six of its older diesel refuse haulers. The replacement haulers will be fueled by compressed natural gas.

Prior funding from the EPA's Clean Diesel Program was spent in South Florida to replace older diesel engine buses with newer clean diesel or alternative fuel buses.

In another year, the Port of Miami received funding to replace diesel engines running its gear with less polluting engines.

for every dollar invested in building-level adaptation strategies, the region will see about four dollars in benefit.

"There are several key take-aways from the report," said Jurado. "First is that of a quantified and positive cost-benefit that reinforces the prudence of proactive resilience investments that not only deliver the necessary risk reductions but also generate benefits in the form of more immediate opportunity."

She said that the region must lead on

resilience planning and implementation, but not only for the obvious reason of addressing the recognized risks.

"This also represents a wise investment in the form of economic development, employment and fiscal strength with benefits that commence today," she said. "Additionally, as we work to advance resilience standards for infrastructure planning, we

CLIMATE

Continued on Page 15

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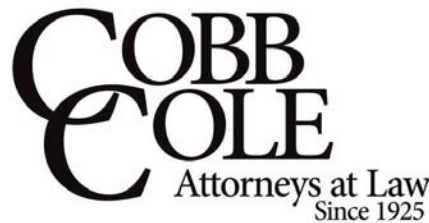


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PRP survey announcement

An informal coalition of environmental industry associations prepared the following survey to support its efforts to restore funding to the state Petroleum Restoration Program.

The survey questions below will also be sent by Mike Eastman, *Florida Specifier*, to stakeholders including ATCs, subcontractors, vendors and site owners through publicly available databases.

Survey responses should be sent directly to Mike Eastman, who will maintain the confidentiality of all responses. Responses are due by Dec. 20, 2020

Responses will be compiled by Jan. 4, 2021, and, submitted to the selected representatives of each association in the coalition that have agreed to participate in reviewing the survey results.

A Zoom meeting of the selected representatives of each participating association will be scheduled in early January to review responses and make recommendations on the most effective method to present the results.

The intent is to obtain relevant information in a confidential manner to help achieve the goals of the coalition.

PRP Survey

Business questions:

1. Are you an agency term contractor, driller, laboratory, vendor or other business that works on Petroleum Restoration Program projects?
2. How many people in your company including outsourced staff work a majority of their time on program projects?
3. If the PRP portion of your revenue is halved, how many employees would you need to lay off?
4. What other damages or effects to your company would stem from a 50% reduction in the program (i.e., not hiring engineers or geologists; no capital investment

PRP

From Page 1

contract spending close to the originally-budgeted levels.

DEP expands some work

On Nov. 20, DEP administrators said that the PRP would authorize additional work in Pilot Test Planning, Remedial Action Plans and Post Active Remediation Monitoring. This is in addition to other ongoing work.

On Nov. 20, the department issued the following announcement:

"We thank stakeholders for staying engaged and sharing concerns with the Department. We are opening up additional categories for encumbering new work.

"We will now be encumbering new work for not only: Continued Remediation Operation & Maintenance; Well Abandonment for Site Closure; and Verification Sampling for Milestone Payment; but we are adding: Remedial Action Plan or Pilot Test; and Post Active Remediation Monitoring.

"Furthermore, the Revenue Estimating Conference calendar shows a meeting on Dec. 9, to discuss Transportation Revenues. We are hopeful that more positive economic forecasts result from that meeting. In the meantime, we will continue to work with the Governor's office and legislative budget offices to evaluate revenues, encumbrances, and expenditures. Thank you again for continuing to stay engaged, and we look forward to continued engagement as we evaluate the health of the trust fund."

The coalition, too, expects better numbers at the Dec. 9th Revenue Estimating Conference based on the upward trajectory of IPTF revenues since May, 2020.

This additional work will help industry stakeholders, but more assessment and remediation work is needed to prevent personnel layoffs and the further spread of groundwater contamination.

Loss of jobs

Consultants and technical service providers cannot continue operations for 10 more months at the current level of PRP spending.

From the perspective of the businesses involved, if they layoff trained technical employees, they may permanently lose them. In fact, some stakeholders began layoffs after the Nov. 12 meeting when news

in equipment; closure of satellite offices, etc.)?

5. Would your business be able to shift to other sources of work, or is there a chance your business may not survive this slowdown?

Site/Client questions:

6. How is the slowdown affecting your site owner and tenant clients?

7. How is the slowdown affecting your client's lenders, and other related professionals working on projects that are dependent on cleanup program funds?

8. How many developer clients, including site owners that desire or are planning renovations or redevelopment, do you have that are or will be impacted by a pause in funding and projected deficit in revenues next year?

9. Will contamination migrate off-site impacting other properties as a result of the current DEP "pause" or reduced funding next year?

10. How many paused sites do you manage that already have off-site contaminant migration?

Support questions:

11. Education of government officials regarding the economic and environmental benefits of the program is critical for the remainder of this fiscal year and into the future. Are you willing to send a call to action letter to your local legislators and communicate the urgency of this matter with them? (If so, contact one of the seven associations working together on this matter; see related column on Page 10.)

12. What suggestions do you have to improve efficiency, budgeting, or management of program activities?

13. Provide additional comments here, if any.

Please send your survey responses to Mike Eastman, *Florida Specifier*, at mreast@enviro-net.com.

of a more prolonged PRP reduction in spending began to circulate.

Employee layoffs could involve hundreds of people, from laborers to highly skilled specialists, if the pause continues long-term. The coalition is working hard to help prevent this from happening.

DEP officials acknowledged the problems this could cause, and coalition leaders are pleased with the Nov. 20 announcement that they believe is a good start toward improving the current year working conditions.

Industry professionals are hopeful that the ongoing dialogue will result in some level of restored funding to this year's PRP operating budget.

Unintended consequences

The coalition's Oct. 9 letter to the governor noted that PRP activity stoppage is not cost-free. Site reassessment will again be required at many sites to reinvestigate contamination spreads during the pause.

For this reason, many real estate projects will be impacted, with a potential loss of income to the state economy more broadly.

Even if the economy continues to recover through next spring, remediation labor may be hard to replace for the roughly 8,000 eligible sites in the program still contaminated by petroleum.

The short-term financial benefits of defunding the PRP for a year or more are minimal in comparison to the cost of rebuilding the industry a year or later into the future.

Public education initiatives

The industry coalition has two primary goals. The first is to restore this year's funding as much as possible, as outlined above. It would also like to ensure PRP funding at or near the same levels that it has been for the past eight years, about \$120 million annually.

The coalition is producing a series of GIS maps to illustrate PRP projects across the state.

The GIS images will overlay cleanup projects with drinking water wells and eligible impacted tank sites, producing a striking representation of how PRP's projects directly protect drinking water infrastructure on private property and close

PRP

Continued on Page 15

IFAS publishes best management practices guide for pond algae blooms

By LOURDES RODRIGUEZ

For decades, stormwater ponds have served master-planned communities and commerce parks with environmental and aesthetic benefits. But in some cases, these same ponds have developed excessive amounts of blue-green algae, blooming with toxins and appearing as surface mats.

It is a common problem in Florida communities. And it's escalating.

In response, researchers and extension agents at the University of Florida Institute of Food and Agricultural Sciences released a guide, Best Management Practices for Blue-Green Algal (cyanobacterial) Blooms in your Stormwater Pond.

The guide is a step-by-step fact sheet designed to empower those responsible for ponds with answers and resources for these man-made ponds that can produce harmful conditions if left unmanaged.

"This guide was created with the intent to raise awareness of the need for action and to determine what to do when these potentially harmful algae invade a stormwater pond," said guide co-author Abbey Tyrna, a water resources agent with UF/IFAS Extension Sarasota County.

Tyrna noted that there are over 76,000 stormwater ponds in Florida and, before now, no guidance has been available regarding proper management. This manual will help fill that gap.

"This fact sheet will help residents and property owners recognize discolorations

in the water that can be indicative of algal blooms to prevent potential exposure, provide information on who they can contact to help identify the algae present and their toxins, while providing some common treatment methods for algal management," said co-author Dail Laughinghouse, assistant professor of applied phycology at the UF/IFAS Ft. Lauderdale Research and Education Center.

Stormwater ponds, Florida's most common method of managing stormwater runoff, are specifically designed to prevent flooding and protect downstream waters from pollutants. The ponds also serve as aesthetic waterbodies.

But stormwater pond water quality is not regulated or managed by state or county agencies, despite vast implementation for most developments since the 1980s to meet the stormwater management rules required under Chapter 62-25, Florida Administrative Code, said Tyrna.

The new guide walks communities and property owners through the steps and the resources needed to properly identify and manage potentially harmful algae living and blooming in their pond's water.

The four-page best practices guide addresses how to recognize the visual presence of potentially toxic algae; when to place public notification signage and when to take it down; when and how often to

sample water; where to send samples to UF/IFAS; how to treat the algae if you choose to try to get rid of it; how to determine the potential causes of algae; and when to consider implementing pond enhancement projects.

Additional resources on the fact sheet provide direction and insight on why stormwater ponds are needed, and how to

manage them to keep them healthy, along with suggested plant directories that are beneficial for ponds, and more.

The guide is available online from the UF/IFAS Extension Sarasota County Water Resources website.

Lourdes Rodriguez is public relations specialist at the University of Florida Institute of Food and Agricultural Sciences.

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PRP

From Page 14

to public drinking water wells.

On Dec. 9, the Revenue Estimating Conference will release another estimate of the state's taxing and spending situation, similar to the one released in early August that initiated the PRP pause.

In January, the state legislature will begin multiple pre-session planning meetings that will provide an opportunity to communicate information from the Dec. 9 budget documents in a way the coalition hopes will further the goal of restoring PRP funding in next fiscal year's budget.

PRP contractors understand the need to make sacrifices under the current pandemic circumstances—but not a loss of program funding in excess of 50 percent when other state programs are slated for something more in the range of eight to ten percent.

Ann Richards, former Texas governor, is credited with the following description of how state budgeting worked in the state: "If you're not at the table, then you're probably on the menu."

Coalition members prefer not to see worthwhile state cleanup projects sauteed due to the current economic conditions. In response, they are pulling chairs up to the table to negotiate well before the budgeting dinner bell rings.

CLIMATE

From Page 13

now have regionally relevant economic figures that speak to the necessary investment in both building-level and community-level improvements.

"One does not compensate for the other, and solutions will necessarily involve both public and private investment."

The report assessed the four counties and their interconnected economies represented by the compact. Broward County is looking toward taking the next steps.

"Most immediately, there is a primary interest in sharing and communicating the report findings with the broader stakeholder community, the private sector and leadership at the state and federal levels and to accelerate investments needed in our infrastructure," Jurado said.

"This isn't about the individual economics of communities. The fiscal impacts of action or inaction will have cascading effects. We must work together to ensure that the impacts are positive. This report reinforces the case for coordinated and immediate action with benefits that will serve us all."



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KINCAID

From Page 10

tions in nutrient pollution stemming from fertilizer use and wastewater disposal.

Existing management strategies are failing. Minimum flows and levels appear to protect spring flows but, in reality, open the door to continued declines while people argue over the difference between natural and human causes.

Best management practices portend to reduce nutrient loading but are unproven, unenforceable and not even conceptually capable of achieving the needed reductions in nutrient pollution.

Attention paid to bottled spring water is a distraction from these systemic failures.

Spring water bottlers' economic self-interest is directly aligned with springs restoration and protection. Bottled spring water cannot be treated if it is to be sold as "spring water." It certainly cannot be captured if there are no more spring flows.

Spring water bottlers rely on access to sustainable, high-quality groundwater. Rather than being labeled as adversaries, they should be viewed as allies in the efforts to restore and protect our Florida springs.

At best, the disproportionate attention paid to this particular use of groundwater distracts Floridians from achieving the needed changes to existing management strategies that have failed to even start bending the steep downward trajectory of Florida's springs.

It's time Floridians stop focusing on

RIVER

From Page 1

tude of fecal coliform exceedances is falling.

Total phosphorus was found to be satisfactory in the freshwater reach of the mainstem but was detected at unsatisfactory levels in the marine/estuarine portion of the mainstem and in tributaries.

Trends in TP remained unchanged during the 2015-2019 observation period in the freshwater reach and tributaries, but the study indicated that levels are worsening in the marine/estuarine reach.

"Pollution continues to be a concern with phosphorus concentrations worsening in the marine section and bacteria is exceeding safe levels in our tributaries," said Rinaman. "Increasing saltwater intrusion and development pressure is damaging and killing wetlands and submerged grasses that provide natural filtration of pollution, fish habitat and flood control.

"While we can celebrate some improvements, the growing stress of sea level

rhetoric that fails to diminish the rate of springs degradation and start working toward and voting for the systemic solutions the springs so desperately need.

Todd Kincaid, PhD, is president of GeoHydros in Reno, NV, and executive director of the conservation organization Project Baseline.

rise, dredging, overconsumption from our aquifer and a growing population must be offset with more robust prevention and restoration."

While some areas showed improvement, the report pointed out trends that are cause for concern.

Cyanobacteria blooms were widely observed and reported during the summer of 2019. Equally troubling is that the dataset developed was limited in scope and missed some bloom events.

Although recent storms added freshwater to the system, salinity levels remained unsatisfactory and concentrations of arsenic, cadmium, lead, nickel and silver increased from 2016 to 2019 in the saltwater reach of the mainstem.

From an ecosystem standpoint, submerged aquatic vegetation declined in several regions in the basin and wetlands continue to be lost due to development pressures, a condition that is anticipated to contribute to flooding from storm surge and sea level rise.

The number of non-native species rose from 87 to 90. An assessment of public awareness indicated a lack of knowledge regarding the impacts of non-native species in the state.

The St. Johns Riverkeeper will continue to propose needed improvements to the management of the river basin.

"We will continue to advocate to stop pollution at its source—reducing sewage and bacteria in our waterways by removing failing septic tanks and addressing antiquated infrastructure, stopping the import and land disposal of South Florida's sewage sludge to reduce phosphorus runoff, and ensuring Florida has protective regulations that prevent degradation," said Rinaman.

In addition, the Riverkeeper will continue working to fortify the river and its tributaries from increasing salinity levels by protecting area wetlands, submerged grasses and freshwater flow.

"To do this, Florida has to make water conservation a priority and reunite Silver Springs, the Ocklawaha and the St. Johns River," she said.

NOTES

From Page 3

Derelict vessel grant. The Florida Fish and Wildlife Conservation Commission awarded Volusia County a \$47,000 grant to assist in removing derelict boats along the St. Johns River.

The program intends to enhance safety by eliminating navigation hazards and to prevent environmental damage that may result from the abandoned vessels.

The county will use the funds to remove five of seven boats known to be abandoned along the river during fiscal year 2020-2021.

FWC reports that Florida is plagued with numerous abandoned vessels.

Abandoned vessels become derelict vessels quickly. FWC said the vessels then subject the boating public to safety issues, becoming locations for illegal activity and illegal housing, creating opportunities for theft and vandalism, and ultimately costing the taxpayers to be removed by local, county or state authorities.

Florida has no salvage laws, so derelict vessels may not be removed without first obtaining a title to the vessel in the state of Florida.

Additionally, removal projects may require environmental permits from DEP and the U.S. Army Corps of Engineers.



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