

Florida Specifier

Practical Information For Environmental Professionals

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Flatwoods project 4

A group of state and local agencies has joined forces in an effort to shift the flow of surface water in Southwest Florida back to its original state.

Base cleanup 5

The U.S. Environmental Protection Agency, the U.S. Air Force and the Florida Department of Environmental Protection have signed off on plans to clean up Tyndall Air Force Base in Florida's Panhandle.

62-780 update 6

The Florida Department of Environmental Protection is modifying portions of Chapter 62-780, FAC, in support of risk-based closure of petroleum-contaminated sites.

South Florida ASR pilots 7

The feasibility of using aquifer storage and recovery facilities as a long-term solution for storing water in Florida is now being tested by the South Florida Water Management District and U.S. Army Corps of Engineers.

Landfill permit denied 9

State environmental officials issued a final order denying a permit application from Angelo's Recycled Materials for construction of a Class I landfill in Pasco County because of its potential impacts on human health and the environment.

Departments

Calendar	11
Federal File	2
Florida Notes	3
Water Watch	4

Got a story lead?

Got an idea for a story? Like to submit a column for consideration? Fire away. 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 the state. Send to P.O. Box 2175, Goldenrod, FL 32733. Call us at (407) 671-7777; fax us at (407) 671-7757, or email mreast@enviro-net.com.

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Photo by Casey Wohl

Students from the Rollins College Environmental Studies Program learn about water conservation projects at the 5,200-acre Rafter T Ranch in Sebring. The ranch has won a number of environmental stewardship awards over the years. Its owner, Jimmy Wohl, was recently named as Audubon Florida's Sustainable Rancher of the Year. See story on Page 14.

Changes to certification audit process expected to impact environmental laboratories

By SUSAN TELFORD

Environmental laboratories provide analytical testing support for state and federal programs including drinking water, wastewater, solid waste, air quality and others, but recent changes to the way labs are certified may directly affect how some do business in the future.

The Florida Department of Health will no longer conduct the audits, instead contracting the process out to third party organizations and individuals—a change that could hit labs hard in the pocketbook.

Labs will now be scrutinized by completely new auditors from out of state—auditors that will likely do things differently from past FDOH audits. They may not be as lenient or forgiving.

"It's really hard for the small labs," said Katie Jaramillo, an account representative with Jupiter Environmental Laboratories Inc. in Jupiter. "Now we have to compete with the big labs and we don't know if it's sustainable for us."

The unexpected financial hit could permanently close the doors of some of the smaller labs that have already been struggling through tough economic times. Many labs are already finding it difficult to compete against the larger national labs when it comes to pricing.

The audits are estimated to cost well over \$10,000 by some lab officials familiar with the outsourced process for the new certification.

Some lab representatives—both in the public and private sectors—said that they received no warning from the Florida Department of Health that this change was happening and are not financially capable of handling it.

"This will continue to be something that creeps up on labs," said Walter

Kronz, vice president with Advanced Environmental Laboratories Inc. headquartered in Jacksonville.

"The new audits will still only occur once every two years, but two years is a long way in the future so (some labs) may just ignore it," he said. "This could bite them pretty hard when they finally face the new audit and it is tougher than any they ever had in the past."

To date, the FDOH has contracted with only six providers who are certified to conduct these audits.

"It's going to hurt a lot of people,"

FRC 2013 in review

Panel discussions highlight 2013 Florida Remediation Conference

By SUSAN TELFORD and ROY LAUGHLIN

Exchanging ideas, comparing notes and learning about the latest advancements in cleanup techniques and technology characterized the 2013 Florida Remediation Conference in Orlando last month.

Engineers, geologists, scientists and other environmental professionals gathered for the two-day event to learn from the top experts in the remediation field.

The program began with the keynote address from long-time FRC Chairman Nick Albergo, PE, DEE, founder of HSA Engineers & Scientists (now CRA), who delivered his talk via video.

Conference attendees had the opportunity to meet with close to 100 companies in the soil and groundwater cleanup business during breaks in the exhibit hall where opportunities were discussed and business cards exchanged.

said Michael Valder, senior account executive with Pace Analytical Services. "They need to figure out how they're going to set up their program and who's going to audit the labs. It needs to be someone neutral."

Some lab professionals in Florida fought to establish a lab consortium to try to avert this change. When it was finally a done deal, the consortium tried to establish the new certification program as a Florida-based non-profit or-

LABS
Continued on Page 13

"I look forward to this meeting every year," said Tim Richter senior account executive of Aerotek E&E. "It is a great opportunity to network."

Richter would know. Aerotek E&E is a national provider of environmental, engineering, architectural construction professionals, servicing firms that support all phases of the construction lifecycle from feasibility to disposal.

Richter is happy to see the upswing in the construction business and has been much busier with recruitment and placement than over the past few years.

This year's conference featured a number of themed panel discussions in addition to the traditional presentations about projects and technologies.

The first panel, focusing on brownfields redevelopment, was moderated by Michael Goldstein, managing partner of The Goldstein Environmental Law Firm in Miami.

FRC
Continued on Page 14

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EPA approves final piece of Florida's numeric nutrient criteria

Staff report

In late September, the U.S. Environmental Protection Agency approved the Florida Department of Environmental Protection's numeric nutrient standards for Panhandle estuaries including Apalachicola Bay, St. Andrews and St. Joseph Bay.

This completes the establishment of these nutrient standards for all of Florida's estuaries, springs, lakes, streams and rivers, as required by a 2009 consent decree between the state of Florida and environmental groups.

With the science of standard setting con-

cluded, the next steps will be administrative.

"Some of the approved criteria are provided in Florida Statutes and the department will conduct rulemaking to incorporate them into the Florida Administrative Code by December, 2014," said Patrick Gillespie, DEP's press secretary. "If the state rulemaking results in different criteria values, the EPA will need to review and approve them at that time."

Florida's rules will come into play when the EPA rescinds its federal standards.

Web access to EIS filings. The EPA now provides an interactive web-based mapping tool that offers access to information on environmental impact statements filed with the EPA for major projects proposed on federal lands and other proposed federal actions.

The new tool's user interface is geographical information system-based. Clicking the cursor on a specific area, South Florida for example, brings up a table with brief titles and further links to environmental impact statements filed with the EPA by federal agencies during the past 60 days.

Some of the information includes comment periods, and comment submission guidelines for EISs under review.

The National Environmental Policy Act requires federal agencies to describe certain types of proposed projects on federal land and waters that may have a significant impact on the environment.

An EIS, one type of description an agency may use, lists impacts and discusses possible alternatives. This tool, like others similar to it, has been favored by the Obama administration to meet its stated commitment to help increase the transparency of enforcement and compliance activities by federal agencies.

The new tool is available at <http://eismapper.epa.gov/>.

Public access to toxic chemical info. ChemView, another of EPA's new web-based tools, was launched in early September to improve access to chemical-specific regulatory information developed by EPA and data submitted under the federal Toxic Substances Control Act.

The EPA's new tool, a graphical database query system, allows users to identify chemicals by name, Chemical Abstracts Service number, use, regulatory action, hazard and information about safer substitutes for specific chemicals.

The information displayed includes key health and safety data, environmental effects and human health effects.

In addition, the EPA's portal links to information about manufacturing, processing, use and release data reported under the Chemical Data Reporting Rule and the Toxics Release Inventory. In addition to providing information about specific chemicals, the query system allows comparison of multiple chemicals sorted by use, hazardous effect or other criteria.

ChemView will not be static. In the months ahead, the agency said that it will be adding information to the database, eventually expanding it to include references to thousands of chemicals.

At this stage of development, the EPA is interested in user feedback. ChemView's homepage includes a link for users to provide that feedback.

The EPA said that ChemView "provides the public with a single access point for information that has been generated on certain chemicals regulated under TSCA."

The EPA further said that access to this data and attempting to identify safer chemical ingredients will give manufacturers and retailers information to distinguish their products by using safer ingredients.

Environmental justice grants awarded. Thirty-nine nonprofit entities across the country will receive a total of \$1.1 million in grant funding provided by EPA's Environmental Justice Small Grants Program.

The grants support a range of efforts from reducing exposure to indoor environmental asthma triggers, reducing and protecting waterways and educating childcare professionals on ways to prevent lead poisoning to reducing pesticide use in childcare facilities.

This applications-oriented grant program is very much a grassroots effort and is awarded to focused efforts that address problems in local areas.

Grant applicants in EPA's Region 4 received four Environmental Justice grants. The recipients were based in Memphis, TN, Athens, GA, Hattiesburg, MS, and Durham, NC.

No Florida grant applicant received 2013 fiscal year funding.

The EPA defines environmental justice as "the fair treatment and meaningful involvement of all people, regardless of race or income, in the environmental decision-making process." It said that the grants represent EPA's commitment to promoting community-based actions to address environmental justice issues.

The EPA begins its annual grant solicitation process shortly after the beginning of each fiscal year. Grant solicitations, which have been posted each fall after the new federal fiscal year begins Oct. 1, are available on-line at <http://www.epa.gov/environmental-justice/grants/ejsm-grants.html>.

Settlement plan for two Florida corals. The National Marine Fisheries Service reached a consent agreement with the Center for Biological Diversity that requires the federal agency to develop a recovery plan for elkhorn and staghorn corals in Florida and the Caribbean Sea.

Under the agreement, NMFS must produce a draft of the plan by 2014 and finalize it promptly in the following months.

Since the 1970s, these two coral species have declined 90 percent on Florida and Caribbean reefs. In 2006, the corals were listed as protected under the Endangered Species Act.

Ocean acidification and elevated seawater temperature arising from global warming have been cited as causes for the extreme decline of these two species.

In spite of the listing, the NMFS did not prepare a recovery plan, as required by law. It did however, propose to reclassify corals from threatened to endangered because of their rapid decline.

The NMFS recovery plan is expected to identify actions necessary to prevent extinction of these corals that could include habitat restoration and protection. What the service might be able to do to reduce the ocean temperatures and acidification—both directly linked to carbon dioxide emissions to the atmosphere—remains to be seen.

Carbon dioxide standards for new coal power plants. EPA released a draft of proposed carbon dioxide emission standards for new coal- and natural gas-fired electricity generating plants.

New "large" gas-powered generating plants have a limit of 1000 pounds of CO₂ per megawatt hour, while "small" natural gas-powered generating plants have a limit of 1100 pounds of CO₂ per megawatt hour.

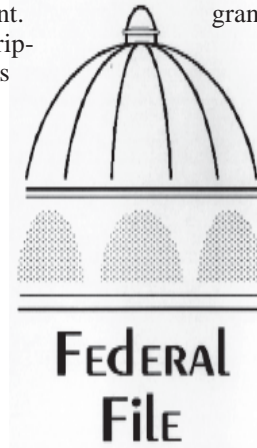
New coal-fired units will be limited to no more than 1100 pounds of CO₂ per megawatt hour.

The proposal stated that the new rules will give new coal-powered plants 12 months to meet the 1100 pounds of CO₂ per megawatt hour emission standard.

Coal plant operators, however, may choose a seven-year phase-in period, but if so, will be bound by lower CO₂ emission rates, either 1000 pounds per megawatt hour or 1050 pounds per megawatt hour, averaged over multiple years.

These new emission standards are a bit more lenient than ones discussed by the EPA in April, 2012. EPA Administrator Gina McCarthy characterized them as the cleanest standards yet proposed for both natural gas- and coal-burning plants.

Natural gas-fueled generating plants should have no difficulty meeting the proposed emission standards. However, the



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Manasota-88 seeks EPA site investigation of former Piney Point phosphate plant

Staff report

Manasota-88 has asked the U.S. Environmental Protection Agency to investigate whether federal water quality standards are now being met at the former Piney Point phosphate processing facility in northern Manatee County.

About 170 million gallons of contaminated wastewater was released from the former plant into Bishop Harbor two years ago during a dredging operation.

The non-profit group devoted to preserving clean water and wildlife habitat in Manatee and Sarasota counties is concerned about the potential for another hazardous wastewater spill.

The group wants an EPA site investigation to determine operator compliance with federal Resource Conservation and Recovery Act requirements.

The group wants to ensure that the facility has developed cost estimates, and provided financial assurance for closure, long-term care and third-party liability for the phosphogypsum stack system.

Other concerns relate to whether contaminated water discharge violated state phosphogypsum stack closure regulations and whether the state has provided reasonable assurances of compliance with DEP-approved water standards.

HRK Holdings is responsible for overseeing maintenance of the closed gyp stacks at the former Piney Point facility.

Space Florida EIS. The Federal Aviation Administration selected a consulting firm to review the potential environmental impacts of building a commercial launch complex on NASA-owned land just south of the city of Oak Hill in Southeast Volusia County.

Virginia-based Cardno TEC will prepare the environmental impact statement, a process expected to take up to 18 months.

Space Florida hopes to attract a private entrepreneur to develop one or two vertical launch pads on about 200 acres of property near the Volusia-Brevard county line.

Local recreational fishing interests, and historical and environmental activists oppose the plan, fearing its impacts to natural resources and reduced access to adjacent areas for public use.

NASA has agreed to support the process to determine what environmental and other impacts the complex could potentially create.

The process will include biological assessments, wetland studies, air quality analysis, natural resource studies, land use planning and meetings to keep the public informed.

Cardno will be assisted by several other consulting firms, including Jones Edmunds & Associates, which worked with Space Florida to prepare a preliminary environmental site review.

DeLeon Springs brownfield. Volusia County Council members have agreed to start the process of designating an area in DeLeon Springs along U.S. 17 as a brownfield site.

The state Brownfields Redevelopment Act allows local governments to designate areas within their jurisdiction as brownfields.

Since the mid-1980s, state and federal government agencies have looked at remedies for environmental damage to the area resulting from a petroleum plume under U.S. 17 on DeLeon Springs' north side.

State transportation officials were widening the highway when they crushed underground storage tanks at what is now a gas station and convenience store.

Efforts to clean up the site have been ongoing since 1988.

In 2005, the Florida Department of Environmental Protection adopted a remedial action plan mandating soil excavation and groundwater treatment.

Over the past two years, excavations have been conducted on the east and west sides of the highway.

But most of the contamination is now thought to be under the highway and continues to migrate west toward the spring.

Cleanup work was supposed to have taken place over the summer to remove contamination. But a legal dispute between Universal Solutions, which has been conducting the clean-up, and DEP delayed the process.

The state has earmarked \$10 million for the cleanup.

There are 15 brownfield-designated areas in Volusia County, all of which were established by city governments. If this site is designated, unincorporated DeLeon Springs will be the first in the county to be approved by the county.

Marion County MFLs. St. Johns River water managers have started working to establish minimum flows and levels for Silver Springs and Silver River in Marion County.

MFLs are used to help ensure that water resources are protected in an area where groundwater withdrawals are being made.

In addition to setting minimum flows and levels for the two Marion County waterbodies, officials with the St. Johns River Water Management District expect that prevention measures will be needed for each of the minimum flows and levels.

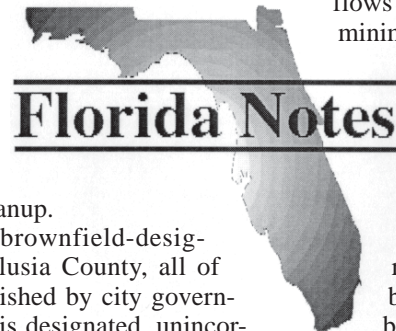
These will ensure that waterway flows and levels will not drop below minimums or will recover to their required levels. Water conservation and alternative water supply projects are some of the measures being considered.

Pipeline approved. State regulators signed off on a plan by Florida Power & Light to build a new 600-mile natural gas pipeline.

The Florida Public Service Commission approved FPL's contracts to purchase natural gas from the new \$3.5 billion pipeline.

The pipeline will run from southwest Alabama through Georgia to Central Florida where it will connect to two existing pipelines.

Another pipeline will be built that connects Orlando to an FPL facility in Indiantown.



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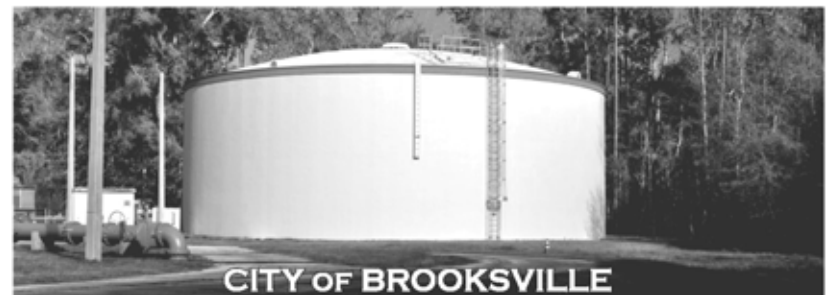
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Flow-through filter marsh project begins on Caloosahatchee River

Staff report

A small step has been taken to improve water quality along the Caloosahatchee River and offer some relief to residents of Southwest Florida that have been suffering from the effects of surface water releases from Lake Okeechobee.

Officials recently broke ground on a \$3-million, multi-year water enhancement project that will use a flow-through filter marsh to enhance water quality.

The aquatic vegetation in the marsh will naturally filter water and pull nitrogen and phosphorous from it. Pumps will

then return the water to the river.

Although thousands of cubic feet per second flow out of the lake, engineers say this project will only handle 100 cubic feet per second of flow. A secondary component of the project is that the area will be able to store approximately one foot of water over its 660 acres.

The project is scheduled for completion in spring 2014.

Port improvement project. The widening and deepening of Canaveral Harbor will begin this fall with the anticipated completion date of Phase 1 of the project

by late 2014.

Based upon House and Senate approval of the Water Resources Reform and Development Act, Port Canaveral's channel will be widened by another 100 feet and deepened an average of two feet along the length of the harbor to accommodate larger vessels, and improve navigational and safety margins.

The passage of WRRDA this fall is essential for funding improvements to Port Canaveral—one of the state's major container ports—and other Florida seaports, and critical seaport infrastructure projects nationwide.

Costs for the channel improvement project total \$57 million, with a contribution of \$19.4 million from the Port Authority and \$37.6 million from the Florida Department of Transportation.

NFWFMD funds water programs. The Northwest Florida Water Management District Governing Board approved several agreements that will continue funding for flood protection and water quality improvement projects in the Panhandle.

A financial agreement between the water district and the Florida Department of Environmental Protection will enable the district to continue a monitoring program to assess water quality on 26 rivers and streams, and a biological habitat monitoring program that biannually samples 24 sites district-wide. The DEP will fund up to \$121,000 for this program.

The governing board also approved a financial agreement between the district, the city of Tallahassee and Leon County that will continue funding for a stormwater flow monitoring program.

Under that agreement, the city and county will provide the district with \$164,000 to operate 53 surface and rainfall data collection stations.

The stations will provide continuous records of rainfall and surface water discharges for the major drainage basins in the area.

The agreement also includes funding for

the operation of a real-time satellite telemetry flood-warning network, which consists of 41 emergency flood warning stream and rainfall stations in Leon County.

Ocala sewer plant improvement. With the Ocala City Council's approval, city water and sewer department staff plan to apply for a grant from the St. Johns River Water Management District to fund modifications to the city's outdated sewer plant.

Upgrades to the city's Water Reclamation Facility No. 2 could reduce the nitrates that are currently polluting local springs.

In an effort to reduce pollution while also meeting the Florida Department of Environmental Protection's new total maximum daily load standards for nitrate, the modifications would reduce the loading by 90 percent.

To meet DEP's stricter standards, city staff recommended extending three of the existing aeration basins by 28 feet and adding a new aeration basin.

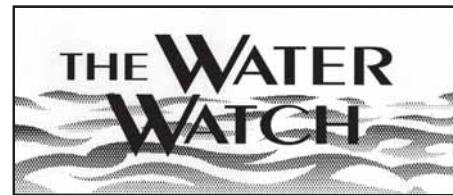
The project would allow the city to prevent 600,000 pounds of nitrates from entering the springs.


Staff is seeking a \$3.8-million grant from SJRWMD and DEP is providing \$1.9 million towards the improvement project estimated to cost \$12 million.

Panama City Beach outfall projects. Officials with Panama City Beach hope to lessen the runoff flow to the beach at stormwater outfall locations by removing three of the city's 50 outfall pipes that flow into the Gulf of Mexico.

City engineers said that moving the outfalls behind Ocean Reef Condominiums, Calypso Beach Resort and Beach Access 51 at Short Street will benefit local beaches environmentally and aesthetically, while also reducing erosion and the less than desirable murky streams of water that outfalls create.

The project includes installation of a system that will catch trash and debris upstream, before it enters the Gulf.






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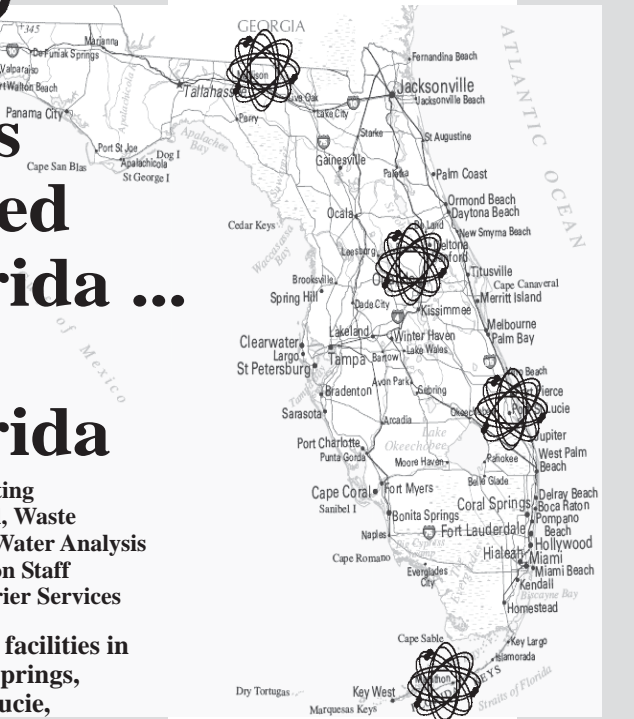
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Flatwoods Initiative seeks to alter Southwest Florida water flow

By DAN MILLOTT

A consortium of 14 state and local agencies has joined forces in an effort to shift the flow of water in Southwest Florida back to its original state.

Before U.S. 41, a rail line and a Florida Power & Light transmission corridor were constructed, surface water in the region moved slowly across the flat terrain toward Charlotte Harbor near Punta Gorda.

Interstate 75, completed in the 1980s, was the final addition to the landscape that impeded that natural flow.

The project, called the Charlotte Harbor Flatwoods Initiative, is a unique alliance between two water management districts, two county governments and several state stakeholders.

Phil Flood, intergovernmental and community outreach representative with the South Florida Water Management District, said the district decided two years ago to pull together a number of studies conducted over the years and target a 90-square-mile area that overlaps Charlotte and Lee counties.

Charlotte County's populated area around Punta Gorda and Port Charlotte are within the boundary of the Southwest Florida Water Management District, while the more rural part of the county is in South Florida Water Management District territory. All of Lee County lies within the SFWMD.

Flood said that after the South Florida Water Management District looked at the

issue, "the first order of business was to get our partners together."

He said the objective of the initiative is to reestablish sheet flow and force more water under I-75, U.S. 41 and the railroad, and move it back into the Charlotte Harbor Preserve.

A vital partner in the project is the Florida Department of Transportation. The agency, backed with some federal dollars, is working on widening I-75. That work dovetails well with what the initiative is doing since it presents opportunities to improve water flow under the highway.

"The beauty of this is that we have both water districts involved as well as both Charlotte and Lee counties," said Flood. "The city of Cape Coral is also involved because a lot of the water flows through nearby Gator Slough."

In Charlotte County, the Cecil Webb Wildlife Management Area and Babcock Ranch were the original sources for the sheet flow of water that made its way to Charlotte Harbor. But with the diversion of the flow, developing North Fort Myers became subject to flooding.

The initiative should help improve that problem.

One helpful element of the initiative is that much of the land in the 90-square-mile project area is state-owned. That reduces the need for future land acquisitions.

"We have done a feasibility study to identify some of the projects," said Flood.

FLATWOODS
Continued on Page 16

Air Force, EPA and DEP reach agreement on cleanup plans for Tyndall Air Force Base

By PRAKASH GANDHI

The clean up of soil and groundwater contamination at Tyndall Air Force Base in Florida's Panhandle has taken a major step forward.

In a significant development, the U.S. Environmental Protection Agency, the U.S. Air Force and the Florida Department of Environmental Protection have signed on to an agreement to clean up the Superfund site.

Tyndall Air Force, located one mile southeast of Panama City, is an active U.S. Air Force installation. In the past, the installation's operations contaminated soil, sediment, ground and surface waters, prompting EPA to place the site on the National Priorities List in 1997.

Past activities on the base included aircraft and vehicle maintenance; storage and distribution of petroleum and jet fuels; landfilling of sanitary, construction, demolition and industrial debris; and domestic and industrial wastewater treatment and disposal.

Contaminants of concerns at the base include pesticides such as DDT and chlordane, petroleum products, wastes and jet fuels mixed with hazardous substances and metals including lead, arsenic, chromium and barium.

The federal Superfund program requires federal agencies to investigate and clean up contamination at their facilities.

The Air Force is responsible for investigating and cleaning up contamination at the base and any contamination that has

migrated off site.

The agreement just reached is considered a prerequisite to continuing cleanup at the base. It provides the mechanism for the Air Force to ensure that contamination is cleaned up to state and federal standards, said officials.

With the signing of the agreement, the Air Force, EPA and DEP have committed to working closely together to align project goals.

"I believe this is a major milestone in the environmental restoration of a federal installation located in one of the most ecologically sensitive areas of our state," said Jorge Caspary, PG, director of DEP's Division of Waste Management. "I am very thankful to the Air Force and the U.S. EPA that we can finally move ahead as a team in addressing environmental issues at Tyndall Air Force Base."

Caspary said the agreement will have other benefits.

"This agreement will also provide an economic boost to the area as professional engineers and scientists will be procured to remediate this site," he said.

The agreement provides a time line for the Air Force to prepare and submit a site management plan. The plan is a document that is updated annually and lays out a plan for work on the site.

The parties will work closely together to choose a procedure for the base cleanup.

The agreement covers cleanup of all known areas of contamination on the base.

It also provides for the addition of areas of contamination that may be discovered in the future. Plus, it allows the environmental agencies to conduct a more thorough investigation on what may be needed in the future.

News that cleanup at the site is moving forward was also welcomed by federal officials. Stan Meiburg, acting regional administrator for EPA's Southeast region, which includes the Florida Panhandle, called the agreement a milestone.

"The agreement speaks to the commitment of the EPA, the Air Force and the state of Florida to ensure protection of human health and the environment at Tyndall Air Force Base," he said in a prepared statement.

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Toxins found in community parks in Miami-Dade County

By DAN MILLOTT

In September, the city of Miami discovered dangerous levels of heavy metals in the 5.38-acre Merrie Christmas Park.

They also discovered high levels of contaminants in Blanche Park, just two miles away from Merrie Christmas.

When the contaminants were first discovered, Miami-Dade County ordered the city to test the soil in all 112 of the city's parks. So far any contamination found in other parks has been within allowable levels.

Miami-Dade gathered samples from the two parks and sent them to a lab for analysis.

Luis Espinoza, a spokesperson with the county's Department of Environmental Resources Management, said that results have been forwarded to the Florida Department of Health.

Those results indicated that the levels of arsenic and lead at both parks are well above maximum levels allowed in Miami-Dade County.

Dr. Samir Elmir, PE, director of the Division of Environmental Health and Engineering at the Miami-Dade County Department of Health, said toxicologists are now reviewing the results sent by the lab.

"We have asked the city for a report on the condition of the soil before it was covered with asphalt and turf a year or so ago," he said.

Since the conditions in the two parks were revealed, families with small children living in the area have voiced concerns about possible health risks their children may have been exposed to.

Officials have also looked into the past history of the area seeking to find out how the contaminants may have gotten there to begin with.

Because melted glass was found at both sites, officials believe toxic ash may have been dumped there at some point.

The Blanche Park site was purchased by the city from the county for \$1 in 1954. Wilbur Mayorga, Miami-Dade County's longtime environmental chief, said it is important to identify the uses of the land at Merrie Christmas and Blanche parks before they were converted to recreational

use.

After the city acquired the Blanche Park site, it was vacant and overgrown for sometime before it was developed into a park. So in that dormant period, it would be difficult to determine what kinds of material may have been dumped there.

The laboratory tests are beginning to reveal that.

In September and October, separate testing has been conducted to not only identify metals, but also other toxins in the soil.

Once all the testing is complete and the current conditions confirmed, appropriate cleanup alternatives will be considered. The best course of action may be to excavate the toxic soil.

Mayorga said that he plans to meet with concerned citizens to update them once the site characterization is complete.



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Chapter 62-780 updated to reform state petroleum cleanup program

By ROY LAUGHLIN

New rule development of Chapter 62-780, Florida Administrative Code, by the Florida Department of Environmental Protection's petroleum cleanup staff began in early September.

Their intent is to modify portions of the rule in support of risk-based closure of appropriately qualified petroleum contaminated sites. The rulemaking involves four revisions to parts of the existing Chapter 62-780 rules.

A couple of the changes in the rule are procedural. One is a list of sources of information and references with the most up-to-date toxicity or exposure factors for petroleum hydrocarbons. They are intended to aid in the preparation of risk assessments.

The second procedural change, characterized as a technical amendment to rule 62-780.100, notes that the chapter's referenced guidelines are for informational purposes only and are not enforceable. In addition, one of the referenced guidelines, the Institutional Controls Procedures Guidance, has been updated.

The majority of the proposed revisions to 62-780 discuss the use of risk-based determinations for guiding outcomes that might lead to site closure.

The revisions are written into two parts of the existing rule. A proposed revision to 62-780.650 "provides clarification to an existing rule provision regarding the use of probabilistic risk assessments. The proposed language clearly identifies the appropriate component of a PRA and the level of detail of supporting information."

A proposed revision to rule 62-780.680 provides for risk-based site closure without institutional or engineering controls. The proposed rule will allow, for the first time, site closure where contaminant concentrations left on site exceed default cleanup target levels.

The absence of institutional or engineering controls may occur upon demonstration that such controls are not necessarily based upon scientific studies or reports relating to a contaminant toxicity or carcinogenicity or upon non-site-specific exposure factors.

Under existing 62-780.650 rules, contamination exceeding default values require institutional or engineering controls for site closure. Under conditions newly defined in the rule, such controls are not now uniformly required.

In its summary, DEP characterized risk-based decisions that do not to require these controls as "regulatory relief from that requirement."

A closer reading of proposed changes in subsections of 62-780 shows a thorough attempt to weave risk assessment methodology throughout the rule, beginning with a few additions and wording modifications in the section on site assessment, 62-780.600.

Section 62-780.650 is a lengthy characterization of the program's new expectations for acceptable risk assessment practices and reporting going forward.

The guidelines begin with a substantial list of resources whose data and guidelines may be used in an acceptable risk assessment. The risk assessment guidelines pertain to both human health and nonhuman species, including pets and livestock, and ecosystems.

The proposed rule does not substantially alter the risk assessment methodology already in the rule. They do however add stipulations requiring those who submit RAs to specifically characterize portions of the assessment such as the type of simulation used, whether the simulation was an open-source model or a proprietary model simulation, the source for the distributions used in the model, and any modifications to a standard model used to generate the risk assessment submitted.

Many of these specific requirements appear intended to make interpretation

more accurate and able to be accomplished in less time.

The new rule includes substantial change to 62-780.680, No Further Action and No Further Action with Controls.

The proposed rule now stipulates closure orders that describe what land use limitations will be written into the institutional controls. Those controls will implement conclusions from the risk-based assessment. The controls have to be referenced, in the proposed rule, to the risk assessment.

The draft rule has specific requirements to inform the applicant of the basis of rejection of a risk assessment, or determination of its insufficiency. Technical and scientific criteria are specifically required to be given by department staff.

The technical details in the proposed rule seem to break no new ground either on risk analysis protocols or administrative procedures, beyond specific reference to petroleum.

Much is drawn from other FAC chapters where risk assessment is already used for cleanup requirements.

Proposed changes are in line with stated objectives to more frequently use risk-based assessments rather than default standards to set site remediation goals.

The primary concern from property owners and responsible parties about this new risk assessment approach is that meeting risk-based criteria for the cleanup program does not reduce all—or as much—liability for the property owner as cleanup to default criteria, the common practice before the Legislature demanded reform.

When DEP published its proposed rule changes on Sept. 13, the department offered to hold a public meeting if one were requested, but had not scheduled one. No such request was made.

The proposed rule next went to the Joint Administrative Procedures Committee for review. JAPC comments led the department to make "some proposed changes in the rule text," according to Mara Burger, a public information specialist with DEP.

Those changes were under review by the JAPC at the time of this article's preparation.

Burger said the rule could become effective by December or January if JAPC accepts the revised language in the rule.

DEP completes work to ensure state-wide ERP consistency

Staff report

A more than year-long rulemaking process to provide more consistency for state-wide environmental resource permitting went into effect in early October.

The Florida Department of Environmental Protection and the state's five water management districts previously used at least five different versions of the ERP rule, which administers permits designed to regulate activities that affect Florida's wetlands and surface waters.

An ERP is required before beginning any construction activity or operation that would affect wetlands or other surface waters or contribute to water pollution. The program exists to protect Florida's lakes and streams, wetlands and other surface waters from stormwater pollution, flooding and other environmental risk factors.

The department began the rulemaking process in June 2012, following legislation granting the agency authority to create one state-wide rule for the environmental resource permit program.

The new rule standardizes processing procedures, definitions and forms that need to be submitted. The permit fee categories have also been standardized. The permit processing fees are now based on the area of work activities instead of the entire site or parcel of land.

The department worked with the wa-

ERP

Continued on Page 7



We're packing up the Florida Remediation Conference again and taking it on the road to South Florida this spring for our 3rd Annual FRC-South Conference—this time to the Bahia Mar on Fort Lauderdale Beach on May 8-9, 2014.

We plan to serve up a day and a half of technical sessions on soil and groundwater cleanup, with an emphasis on the unique geology and regulatory framework of South Florida.

We have started accepting 250-word abstracts on the subjects listed to the right. E-mail abstracts to Mike Eastman, conference manager, at mreast@enviro-net.com.

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South Florida ASR pilot project shows promise to store, recover stormwater

By SUSAN TELFORD

Aquifer storage and recovery facilities have been used in Florida and throughout the U.S. for about 30 years, but the feasibility of using ASR as a long-term solution for storing water in Florida is currently being tested by the South Florida Water Management District and U.S. Army Corps of Engineers.

Addressing the SFWMD Governing Board last month, scientists from the district offered an inside look at an ongoing ASR pilot program, part of the original Comprehensive Everglades Restoration Plan, that shows promise in its ability to store runoff, convert the water from dirty to clean and then deliver it back to the Lake Okeechobee Basin.

"A large benefit is that it is improving the water quality," said Dean Powell, director of the watershed management program for SFWMD. "Inflow water comes in from the Kissimmee with 130-150 parts per billion of phosphorous, but goes out at between 10 and 30 ppb."

The first pilot ASR is located where the Kissimmee River connects with Lake Okeechobee.

The ASR system has been operational through several cycles and has the ability to store 3,000-acre feet of water on a 'footprint of two acres' with 100 percent recovery.

Not to be confused with deep well injection—the process where wastewater is injected deep underground permanently—ASR facilities inject and then recover treated and untreated groundwater, partially treated surface water and reclaimed wastewater.

At most ASR facilities in Florida, the water is stored in the Upper Floridan Aquifer, primarily in areas where the aquifer is brackish. The pumped water then forms a freshwater bubble where it remains stored until needed.

ASR technology can store more water than a typical above-ground reservoir system and can provide large volumes of water over longer periods of time, increasing water supplies during seasonal and multi-year droughts.

The second pilot ASR is located near the Hillsboro Canal where well rehabilitation was required on site. The recovery efficiency is lower at 40 percent because the aquifer is more saline. Powell said that its efficiency should increase over time.

Both the district and the corps anticipate that test results should provide a vast amount of data about the ASR concept and how it may be applicable to CERP.

Although CERP has adapted to limited cash flow, delays due to a slow economy and government furloughs, the major plan components are still the same: surface water storage reservoirs; water preserve areas; management of Lake Okeechobee as an ecological resource; improved water deliveries to estuaries; underground water storage; treatment wetlands; improved water deliveries to the Everglades; removal of barriers to sheetflow; storage of water in existing quarries; reuse of wastewater; improved water conservation and addi-

tional feasibility studies.

While the CERP Restudy did not directly call for an ASR study, it was agreed that a coordinated central data collection and regional modeling effort was required to address the large-scale ASR implementation issues under CERP.

The study investigated regional and technical issues governing the feasibility of full-scale ASR implementation and its potential effect on water and water quality within the aquifer systems, and on existing water users, surface water bodies and the flora and fauna that inhabit them.

Ernie Barnett, aquatic biologist and assistant executive director of SFWMD, described the ASR as a feasible feature of CERP that "directly deals with Lake Okeechobee releases into estuaries."

Each well costs approximately \$4 million to construct but the added benefit of ASR technology is that it requires a very small land footprint, so the cost to purchase land is much less than it would be for purchasing land for above-ground reservoirs for water storage.

According to Powell, the groundwater model shows that the aquifer can support 140 wells without losing its integrity.

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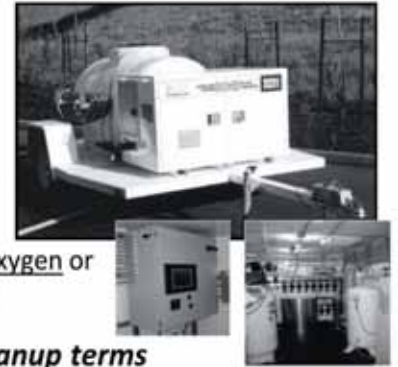
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From Page 6

ter management districts, local governments, citizens and businesses throughout the development of the state-wide rule, hosting more than 10 webinar workshops. For the first time, stakeholders were able to communicate, discuss, comment and make suggestions in an on-line discussion forum and participate in workshops via the web.

The department also rolled out an electronic site where applicants will be able to apply for ERP permits by submitting the application and associated materials on-line instead of having to submit paper copies.

This new service was developed alongside the state-wide ERP rulemaking process to save time and money for both applicants and the department.

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University of Calgary team demonstrates new tool for PCB-contaminated soil cleanup

By ROY LAUGHLIN

Chemistry and engineering faculty at the University of Calgary, Canada, have designed a system to dechlorinate polychlorinated biphenyls, leaving chloride and biphenyl, a much less toxic hydrocarbon.

The chemistry aspect involves treatment of PCB-contaminated soils with hydrogen peroxide to degrade most organic compounds, followed by PCB extraction into isopropanol.

Two hundred and fifty liters of alcohol are used to treat one cubic meter of soil. After separation from treated soil, extraction isopropanol is distilled, reducing the "bottoms" volume containing PCBs to 10 percent of the original volume.

The distillate has no PCB codistillates so it is reused for another soil extraction cycle. The PCB isopropanol solution (the bottoms) is exposed to ultraviolet light using a standard disinfection mercury lamp.

Chlorine atoms in the PCB absorb UV light, breaking the carbon-chlorine bond, releasing the chloride. Breakage of any single carbon-chlorine bond is spontaneous when it absorbs UV light.

The treatment for an extract usually takes about four hours but can be adjusted for the PCB amount present. The UV treatment yields isopropanol containing biphenyl and other substances that make it unsuitable for further extractions.

The post-UV treatment isopropanol solutions can be incinerated for complete destruction of the remaining organic solutes.

Dr. Cooper Langford, professor emeritus in the UC Department of Chemistry, was the lead for the chemistry aspects of technology development.

Gopal Achari, a professor at the UC Schulich School Engineering, was the lead for the project's engineering development.

His group developed a prototype that is a truck-mounted mechanical system that treats contaminated soils.

The system consists of three treatment modules plus storage. The first module includes a tank in which to treat soil with peroxide and then the isopropyl alcohol solvent.

The second module distills isopropanol to concentrate its extracts and recover 90 percent of the alcohol for reuse.

The third module, which performs UV treatment, is a commercial disinfection lamp inside a flow-through pipe. The isopropanol extract flows around the treatment lamp to expose PCB solutes to the bond-destructive light.

In a final step, the treated isopropanol bottoms are shipped separately to an incinerator for complete destruction.

Treated soil can be immediately returned to the site. All the equipment is housed in a 15 meter shipping container that can be transported on a flat bed trailer.

The prototype device treats one cubic meter of soil per day.

Langford said that he sees no particular barriers to scaling up the treatment process.

All components in the treatment system are commercially available and larger equivalent devices and components are available to scale up the treatment system, he said.

This new treatment technology is valuable because it treats wet soil, making sediments treatable "as is."

Langford noted that the technology has one limitation important to potential users. It does not effectively treat the concentrated oil-PCB mixture that comes from, for example, transformers.

On the other hand, after its oil-PCB

mixture is removed, isopropanol can be used to rinse down a device and PCB in that rinse can be treated effectively.

Langford said that the Canadian Natural Science and Engineering Research Council and TransCanada, a private company that owns pipelines for oil and gas transmission, supported the research and development project.

TransCanada may eventually use it, but it is also offered for technology licensing by Innovate Calgary, which handles com-

mercialization of the University of Calgary's intellectual property.

Langford said that two companies have expressed interest in technology licenses, but others are welcome to inquire.

Because this treatment system needs only modest temperatures and is relatively low energy, Langford said it offers benefits to PCB cleanup not available when using incineration, in particular.

Its mobility for small treatments is also an advantage, obviating the need for transporting contaminated soils and other materials.

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Denied: DEP issues final order nixing permit for Pasco County landfill

By PRAKASH GANDHI

State environmental officials issued a final order to deny a permit application from Angelo's Recycled Materials in Tampa for construction of a Class I landfill in Pasco County because of its potential impact on human health and the environment.

The decision is the latest twist in a long-running saga that pitted the company against environmental groups and state regulatory officials.

The company first applied in October of 2006 for permits to build and operate the landfill. The facility would have served the bustling Tampa/St. Petersburg region.

Environmental activists said the permit would have placed springs in Hernando County and the Withlacoochee River at risk for contamination.

Residents, government officials and many business leaders were strongly opposed to the project.

Studies showed the area is prone to sinkholes. Overwhelming evidence was presented that the project was targeted for a geologically unstable area.

If a sinkhole opened, drinking water wells and the Hillsborough River—Tampa's chief source of drinking water—could have been contaminated, said project opponents.

They received the backing of the Florida Department of Environmental Protection which in 2009 issued a notice of intent to deny the permit.

Based on the information submitted by the company, which included the presence of sinkholes, the department determined that Angelo's had not provided reasonable assurance that the subsurface could support the weight of a landfill, said DEP spokesperson Mara Burger.

Officials were especially concerned that a sinkhole could open up below the landfill and send leachate into drinking water aquifers and the nearby Green Swamp.

The company filed a petition challeng-

ing the DEP permit denial, which was forwarded to the state Division of Administrative Hearings for a formal hearing.

Burger said the company provided additional information to the department for consideration. But Angelo's suffered another setback when the original decision to deny was reaffirmed early last year.

In June, an administrative law judge issued a recommended order to deny the permit.

The judge said the proposed 30-acre

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Continued on Page 16

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Harmful algal blooms on the rise in Florida pose challenges for state regulatory agencies

By ROY LAUGHLIN

Algae blooms get a lot of attention locally when they occur. Drastic water color changes in lakes and estuaries are hard to miss. Malodorous fish kills and perhaps skin rashes on bathers are impossible to ignore.

Because they are typically localized in a lake or estuary and are ephemeral, the impact of each bloom may seem minimal in the bigger scheme.

Collectively though, the occurrence of nuisance and harmful algal blooms seems to be on the upswing in Florida.

Algal blooms are an indication of high nutrient levels that fuel the rapid growth of microscopic single-cell or mat-forming algal species. Algal blooms can occur in any aquatic ecosystem but with differences in algal composition.

Cyanobacteria (photosynthetic bacteria) along with eukaryotic phytoplankton, dominate algal blooms in freshwater systems. Cyanobacteria blooms are usual only in freshwater systems.

Estuarine algal blooms are usually dominated by dinoflagellates and diatoms.

Cyanobacteria are typically abundant only in low salinity estuaries. In the open sea, diatoms and other phytoplankton species may be the primary cause of algal blooms.

Algal blooms are part of Florida's seasonal cycle in aquatic ecosystems. It is their intensity and duration that distinguishes them as nuisance events.

"2004-2005 were active years (for algal blooms)," said Richard Whiting, program administrator in the Bureau of Laboratories at the Florida Department of Environmental Protection.

Whiting noted that this year, with its abundant rains, "We did see an up tick (in algal bloom activity) in the lower St. Johns River, the Caloosahatchee and lower Indian River estuary."

Algal blooms can have both damaging ecological and toxicological components. In Florida, persistent algal blooms are problems when they shade out submerged benthic algae, such as sea grass, or overgrow it as epiphytic algae.

Intense algae blooms cause oxygen levels to crash between midnight and sunrise. Algae produce oxygen when sunlight supports photosynthesis, but their cellular respiration at night depletes dissolved oxygen concentrations.

Prolonged and repetitive low oxygen conditions cause fish kills and may also kill submerged aquatic vegetation. On an ecosystem basis, low oxygen tension during blooms is the primary problem.

In some cases, toxic algal species dominate a bloom. Their toxins taint drinking water and seafood. Harmful algal bloom is the name given to an extensive bloom of toxin-producing algae.

Florida's red tide is an example of a recurring toxic algal species that kills fish and marine mammals, and causes respiratory and skin irritation in humans. The red tide blooms are enigmatically complex and certainly supported by excess nutrient levels, if not initiated by them.

In freshwater, cyanobacteria are the usual culprits for harmful algal blooms. Vertebrates other than fish are most at risk.

There are human health risks when public drinking water suppliers draw surface water from a lake or stream during a bloom.

The usual drinking water treatment processes are capable of significantly reducing algal toxin concentrations but some sensitive individuals may still report skin rashes or other symptoms.

In Florida, several different agencies deal with algal blooms.

At the regional level, the five water management districts have a direct role

through stormwater and water quality management.

At the state level, the Florida Department of Environmental Protection is actively involved in regulating nutrient levels. The intended benefit of numeric nutrient standards is the reduction or elimination of persistent or broadly extensive algal blooms in freshwater and estuary waters.

The Florida Department of Health also plays a role, issuing advisories for harmful algal blooms in Florida, and advisories on consumption of seafood that may be affected by algal toxins.

Since April of this year, the Florida DOH has issued two advisories, one for a lake in Alachua County and one for the St. Lucie River estuary in Martin County.

Florida's Fish and Wildlife Conservation Commission is another state agency that deals primarily with blooms that cause fish kills or poison wildlife.

The commission is the lead agency for red tide investigations in Florida because red tide can cause such extensive fish kills, and eventually may harm wildlife species such as manatees, dolphin and birds.

"Florida struggles with so many aquatic systems, many managers and many hierarchies," said Alan Wilson, associate professor of limnology in the Department of Fisheries and Allied Aquacultures at Auburn University, in characterizing the regulatory involvement of Florida's agencies involved in reducing the adverse effects of algal blooms.

Whiting noted that each regulatory agency has responsibilities consistent with its mission. DEP uses a database tracking system, Caspio, originally developed by the state Department of Health, that staff within several state agencies use to track algal blooms.

"Once a response is underway, we record who sampled, what the results were and if human health impacts occurred," he said.

Caspio is not publicly accessible, but enrolled staff members often share information on Caspio with the public.

Caspio is helpful for keeping records and coordinating information among Florida's agencies.

But officials are far from being able to predict which algal blooms could potentially become harmful blooms.

"Blooms are dynamic," said Whiting. "Often prevailing conditions cause changes in how the bloom is presenting itself."

An example he characterized further is how barometric pressure changes during a weather front's passage can cause *Microcystis*, a cyanobacteria, to form a surface scum that is blown to shore and concentrates where people and pets can be affected by direct contact. Absent the change in weather, the bloom would cause no problems.

With a lack of consistent algal bloom characteristics, standard responses are impossible for state agencies to formulate. Responses are largely reactive.

"When an event occurs and there's a question about what kind of a response is needed, we have forms that ask a standardized list of questions to determine what agencies should be involved," said Whiting.

Reducing the adverse effects of algal blooms is a primary goal of Florida's now completed numeric nutrient standards.

Whiting said that a reduction in nutrient levels that will squelch algae blooms will come more quickly to aquatic systems that are well flushed and more slowly to those with poor flushing.

In either case, improvements resulting from the new standards are expected in the long term.

While the causes of algae blooms are thoroughly understood in general, effective steps to allow them to occur beneficially and to end them when they cause damage are far more elusive.

Reducing nutrients in surface water may very well be the most significant step toward reducing harmful algae blooms in the future.

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Calendar

November

NOV. 3-7 – Meeting: 2013 International Annual Meetings of the American Society of Agronomy, Crop Science Society of America and Soil Science Society of America, Tampa, FL. Call (508) 273-8080.

NOV. 4-7 – Meeting: 2013 American Water Resources Association Conference, Portland, OR. Call (540) 687-8390 or visit www.awra.org.

NOV. 4-8 – Course: Backflow Prevention Assembly Tester Training and Certification, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 4 – Course: Backflow Prevention Recertification Review, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

NOV. 5-6 – Course: Flow Meter Calibrations, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 5 – Course: Lead: Renovation, Repair & Painting - Refresher, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 6 – Course: Lead: Renovation, Repair & Painting, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

NOV. 6 – Course: Asbestos Refresher: Management Planner, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 7 – Course: Asbestos Refresher: Contractor/Supervisor, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 8 – Field Trip: SEGS SMR Aggregates Field Trip, Sarasota, FL. Presented by the Florida Association of Professional Geologists. Visit www.fapg.org.

NOV. 11 – Course: Backflow Prevention Recertification Review, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 12 – Course: Backflow Prevention Recertification Exam, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 12-14 – Course: Asbestos: Project Design, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 12-14 – Conference: 20th Integrated Petroleum Environmental Conference, San Antonio, TX. Presented by the University of Tulsa, the University of Oklahoma, Oklahoma State University, and the University of Arkansas. Contact Dr. Kerry Sublette at (918) 631-3085 or kerry-sublette@utulsa.edu.

NOV. 13 – Workshop: Northwest Florida Brownfields Workshop, Crestview, FL. Presented by the Northwest District of the Florida Department of Environmental Protection and the North Florida and Apalachee regional planning councils. Contact Sally Cooley at (850) 595-0558 or visit www.dep.state.fl.us/northwest/.

NOV. 13 – Course: Globally Harmonized System [GHS] of Hazard Communication-The New Requirement, Webinar, Presented by the University of Florida

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

NOV. 13-16 – Conference: International Conference on Sustainability, Sarasota, FL. Presented by Sarasota Sister Cities Association and the University of Florida Sarasota/Manatee. Visit sarasotasistercities.org.

NOV. 14 – Course: Backflow Prevention Recertification Review, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 14 – Course: Backflow Prevention Recertification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 14 – Course: The Science of Disinfection, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 15 – Course: Backflow Prevention Recertification Exam, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 15 – Course: Backflow Prevention Recertification Exam, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 15 – Meeting: 2013 AWRA Florida Technical Meeting: Protection and Restoration of Florida Springs, Homosassa Springs State Park, FL. Presented by the Florida Chapter of the American Water Resources Association. Visit www.awraflorida.org.

NOV. 15-16 – Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 16 – Course: Backflow Prevention Recertification Review, Bradenton, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 16 – Course: Backflow Prevention Recertification Review, Key West, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

NOV. 18-22 – Course: Backflow Prevention Assembly Tester Training and Certification, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 18-22 – Course: Water Class A Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 19-22 – Course: Water Class B Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 20 – Course: 4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Sta-

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

NOV. 20 – Course: 8-Hour Training Course for Spotters at Landfills, C&D Sites and Transfer Stations, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

NOV. 20-22 – Course: Initial Training course for Landfill Operators and C&D Sites-24 Hour, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

NOV. 20-22 – Seminar: National Clean Water Law Seminar, San Antonio, TX. Presented by the National Association of Clean Water Agencies. Call (202) 833-2672 or visit www.nacwa.org.

NOV. 21 – Course: Health and Safety for Solid Waste Workers-Part 3, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

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

NOV. 23 – Course: Backflow Prevention Recertifi-

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

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


NOV. 24 – Course: Backflow Prevention Recertification Exam, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

December

DEC. 2 – Course: Backflow Prevention Recertification Review, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

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

DEC. 4-5 – Course: Initial Training course for Landfill Operators and Material Recovery Facilities-16 Hour, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.



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Passage of Water Resources Reform and Development Act will benefit Floridians

By ROY LAUGHLIN

When the House of Representatives passed the Water Resources Reform and Development Act on Oct. 24, as much as \$14.1 billion of federal support for harbor dredging, dam construction and other federal waterway improvements was approved.

"Passing the Water Resources Reform and Development Act, which included four new Everglades restoration projects, had wide consensus by all participants as a major step forward in addressing this

pressing issue," said Erin Moffet Hale, spokesperson for U.S. Rep. Patrick Murphy (D-Ft. Pierce). "All of these projects are interconnected and collectively work together to filter water and could allow for more water to move south of Lake Okeechobee."

"Reform" in the bill's name refers to sections that deauthorize \$12 billion in federal projects approved before 2007, but not funded or in some cases, completed. Other provisions in the House bill stream-

lined the permitting process, primarily U.S. Army Corps of Engineer permits, by capping studies at \$3 million and limiting duration to three years.

The bill also included provisions giving Congress closer oversight and approval of individual projects, something that traditionally it eschewed but is increasingly part of bills involving environmental and public works authorization.

The private sector will be expected to make cost-sharing contributions to many projects. Port development, in particular, may have to provide a 20 percent share of project costs.

The House bill does not authorize the continuation of any beach renourishment projects. In the future, renourishment projects will compete for funding in the general Army Corps funding pool.

Beach renourishment underwritten by the federal government has been a huge benefit for many Florida beach front communities in the past.

But hard nosed reform groups, such as the Heritage Foundation, are pushing for Congress to require additional funding from non-federal sources.

Finally, Congress' bill requires the General Services Administration to sell excess property.

Congressional support for the bill was overwhelming. It passed 417 to 3. All Florida's Congressmen voted to approve the bill, except for two members who were absent for the vote.

The bill's strongest supporters appear to be farmers and agricultural interests.

In addition, ports and navigation interests, and the local and state governments that benefit from them, were uniformly positive about the bill, the federal government's primary funding conduit for navigation and seaport construction, renovation and maintenance. Florida projects are slated to get a substantial amount of federal funding from this reauthorization.

Florida Congressman Patrick Murphy said in a recent interview on National Public Radio that Florida is slated to receive at least \$1.8 billion of the available funding for projects in Florida, including navigation projects in Jacksonville Harbor and Port Canaveral, plus four Everglades projects.

Florida ports that want deeper channels to allow entry by the larger ships expected

to transit the enlarged Panama Canal in 2015 are also looking for federal money from this bill to complete channel and harbor deepening projects.

Flood zone mapping is another component of this bill that will benefit Floridians.

In dramatic fashion, Congressman Murphy brought a bottle of polluted water from a waterway in his district to the House podium, and got money inserted in the bill's language for a water diversion project that will help protect the Indian River Lagoon and Caloosahatchee River.

In the NPR interview, he noted that some Everglades restoration projects were not included in the bill. Hale elaborated that the projects referred to were part of the Central Everglades Planning Project.

Language inserted in the bill "will allow for the South Florida Water Management District to move forward with and be credited for work on this project once the chief's report is finalized by the Army Corps without Congressional approval," she said.

WRRDA passage is part of a process that is expected to eventually reauthorize the federal Water Resources Act. That act is usually reauthorized on a three-year cycle, but it has not been reauthorized since 2007.

The Senate passed its WRA reauthorization bill in May, 2013. The Senate bill does not include nearly as many of the reform elements that conservative spending and small government advocates included as part of the House bill.

House and Senate conference committee negotiations throughout the remainder of 2013 are expected to produce a compromise bill that stands a good chance of passing both sides of Congress.

Such a bill could come up for vote as early as January, 2014.

WRRDA is not an appropriations bill. A project has to be authorized before it can be included in an appropriations bill that funds it.

"Given the overwhelming, bipartisan support for both the House and Senate versions of this bill when they passed their respective chambers, the conference should be noncontroversial and move quickly to allow for a final vote early in the new year," said Hale.

Considering that the benefits are many, that 2014 is an election year and that WRRDA passed by such a large majority in the House of Representatives, the final WRA is likely to be approved early in 2014. Florida could be a big winner.

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Opposition to medical waste incinerator in Suwannee County slows fast-track plans

By **BLANCHE HARDY, PG**

In 2012, the Florida Legislature included provisions within state law to promote economic development in Rural Areas of Critical Economic Concern, or RACEC.

RACEC-designated areas are rural communities—counties with populations of 75,000 or less or counties with populations of 125,000 or less that are contiguous to a county with a population of 75,000.

Designation as a RACEC facilitates the creation of “catalyst” projects and designation of parcels of land as “catalyst” sites.

As defined by statute, a “catalyst” is “a parcel or parcels of land within a rural area of critical economic concern that has been prioritized as a geographic site for economic development through partnerships with state, regional and local organizations.”

In compliance with the definition, negotiation of an intergovernmental and inter-agency memo of understanding is required that facilitates state funding for research, site selection, marketing and infrastructure and grants initiatives such as waived criteria and requirements, fast-track permitting and related truncated public involvement and notice.

Essentially, the catalysts function as

shovel-ready pre-approved industrial sites looking for an occupant.

Among the advertising points made by Enterprise Florida to attract business and industry to RACECs is locating new operations in the “environmentally pristine environments” characteristic of rural Florida.

The combination of the two—MOA privileges and environmentally pristine—have blown the lid off a public pressure cooker in relation to Suwannee County’s 500-acre North Central RACEC catalyst site near Live Oak.

The county initially supported the use of 25 acres within the catalyst site for a medical waste incinerator complex capable of processing up to 120 tons of medical and infectious waste proposed by Pennsylvania-based Integrated Waste Management Systems.

A similar proposal from the same company was rejected by neighboring Baker County last year.

Public knowledge of the planned incinerator was stirred up in mid-summer this year, at roughly the same time county commissioners approved an ordinance compatible with RACEC intent.

The ordinance amended county land development regulations to allow industrial program in 1999.

Today, officials with the state environmental lab certification program continue to be active in the development and adoption of national consensus accreditation standards through work with The NELAC Institute.

But that’s of little concern to the labs that this new program will impact.

“Some labs may find themselves losing certification for a compound or two,” said Kronz. “Think of it like this: think of a home builder who lost his license to put in windows. He couldn’t build a single house because no one wants a house with no windows. The same would happen to a lab if they lost certification for benzene, for example. No one wants BTEX or VOA analysis without benzene, and no one wants petroleum testing without benzene.

“So, if a lab lost its certification for benzene, or any one of a few dozen other chemicals, they would essentially be shut down for most of their work. It may seem extreme, but with completely new firms auditing labs familiar with the FDOH process, it could happen. The big labs may survive the audits better simply because most have been audited by private auditing companies already for other states, or for industrial clients or the U.S. Department of Defense. But for many small labs and city/county labs, this new process could come as a bit of a shock,” said Kronz.

tries locating within the 500-acre catalyst site to do so without obtaining a special exception or special use permit, and publication of the Florida Department of Environmental Protection’s public notice of the comment period on the incinerator complex’s air permit in the local paper.

Public reaction was immediate and intense, both in traditional and social media.

Baker County residents, having successfully opposed the incinerator complex in their county, didn’t want it next door either.

They joined the rapidly growing number of Suwannee residents expressing their

concern and opposition.

Without public hearings and the education and trust garnered through participation in public involvement, residents educated themselves to fundamentally understand and use words and phrases like “dioxin emissions” and “nanoparticles.”

They petitioned DEP for a time extension of the 14-day air permit comment period and they petitioned the community, garnering over 1,000 signatures opposing the incinerator in a matter of weeks, no small achievement for a small community of 7,000 residents.

INCINERATOR
Continued on Page 15

LABS

From Page 1

organization, with no luck.

The Environmental Laboratory Certification Program was established in 1979 to ensure laboratory quality and capacity for the testing of drinking water regulated under the federal Safe Drinking Water Act.

The program was later expanded to test domestic wastewater conducted under the Clean Water Act, as well as certification for other types of environmental testing.

The certification program seeks to assure the quality, reliability and validity of testing results on which environmental decisions are made by certifying labs that test drinking water, wastewater, solid and hazardous waste and other types of samples are operating in accordance with the quality standards of the National Environmental Laboratory Accreditation Program.

It is the responsibility of the Florida Department of Health to protect the health, safety and welfare of the citizens of the state from the hazards of inadequate performance of environmental labs.

The Florida program took an active role in establishing both the National Environmental Laboratory Accreditation Conference and the National Environmental Laboratory Accreditation Program, becoming one of the first of 13 accreditation bodies in the U.S. recognized under the

Environmental Services

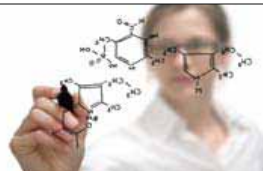
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Pragmatic and insightful, Goldstein discussed brownfield cleanup and the many programs—with possible grant money available—for companies interested in remediation.

Goldstein shared a concise economic and project-based summary of the 16-year history of the Florida Brownfields Program.

Following Goldstein, David Goldman, PG, senior vice president with Kimley-Horn & Associates in Jacksonville, discussed properly setting expectations of usability, relevance and success with private and public sector clients. He also

shared strategies for complying with technical requirements associated with brownfield related economic incentives.

Chris Bird, environmental protection director with the Alachua County Board of County Commissioners in Gainesville, presented his local government perspective on brownfields and the state brownfields program.

The second panel discussion, focusing on assessment and remediation activities at the Florida Department of Transportation, featured FDOT regional contamination impact coordinators from FDOT districts around the state.

Vince Fusconi, FDOT District 4 CIC, led the panel in answering questions from

the audience in a round-robin characterization of the details of FDOT activities.

Those activities range from how FDOT manages its permits, to who takes the lead on a project that may involve roads, and dealing with utilities underneath them from storm drains to electricity lines to public drinking water supply pipes.

As Fusconi noted, he never knows what type of contamination might exist alongside a road's right-of-way, so opportunities for collaboration between environmental professionals and FDOT project staff is wide open.

Ongoing changes within the state Petroleum Restoration Program, formerly the Bureau of Petroleum Storage Systems, was the focus of the third panel discussion led by Glenn MacGraw, PG, vice president with The FGS Group, and by Jorge Caspary, PG, director of the DEP's Division of Waste Management.

Joining MacGraw and Caspary on the panel were Valerie Huegel, program administrator of the DEP Petroleum Restoration Program; Robert Cowdery, PE, an environmental engineer with DEP; Rebecca Marks, team leader with the DEP's Petroleum Restoration Program; and Diane Pickett, PG, chief geologist with the DEP's Petroleum Restoration Program.

Changes to the petroleum cleanup program, a major source of funding for Florida's soil and groundwater cleanup professionals, has been a source of anxiety since the Florida Legislature's mandate earlier this year that reforms be made to the way the program operates.

DEP speakers reiterated that changes are coming that are intended to make the program more efficient. Increasing reliance on risk-based criteria to return properties to economically beneficial use will become dominant, replacing "default standards" as the target of petroleum cleanup efforts.

Much of the discussion revolved around the program's operational changes, what funding was available, and to some extent, time frames. That money will continue to be available over the next five years at approximately \$120 million per year should be good news to Florida's cleanup professionals, even if that level is lower than peak funding several years ago.

Site assessments are going to be a major component of the changes, particularly with the reinvigorated Low-Scored Site Initiative program.

Staff members within the program have been reassigned, with a view towards greater productivity, and matching professional activities to a primary technical focus assigned to different working groups.

The department will begin operating in a large way using the state's e-quote system, MyFlorida.com. Advice from the panel was to register multiple staff members at a company to receive notice of e-quotes.

Panelists noted that the LSSI program will receive only \$20 million and yet it could account for the bulk of site closures.

LSSI assessments have been shown to be the most effective tool for picking the low hanging fruit, comprised of modestly contaminated or even uncontaminated sites.

Pickett noted that the new program requires DEP to write proposals for LSSI sites, and that the details required might be characterized as "proposals on steroids," compared to prior practice.

This effort is one that the department is getting its arms around right now and, with time, should progress more smoothly. She noted that there are enough drill rigs in Florida to get the work done.

Cowdery, the PRP's technical guru, suggested that the new emphasis on efficiency, and new procedures for implementation, are likely to result in an uptick in sites selected for remediation in the short term.

He cautioned however that "muscular approaches" for remediation will be deemphasized in favor of in-situ treatment technologies. He noted that "the ratio of technologies we use will change, but not the magnitude of the effort."

He also said that conditional closures will be formulated to look for exit strategies. If the risk is gone, he said, "so will we."

The department is no longer interested in getting rid of the last microgram of contamination from a site. In concert with that philosophy, Cowdery said that "every sample (for laboratory analysis) should be linked to an anticipated action." Monitoring, he said, is not going to occur with the same frequency of the past.

One side note of the discussion that may be of interest is that the program intends to sell all of its equipment, much of which is in storage in central Florida. Those interested in bidding should contact officials in Tallahassee.

There were a number of questions following introductory comments by panelists. Several delved into how the program will handle no further action closures, with or without controls.

Panelists noted that risk-based criteria will be applied to make the determination. The department will not pay for engineering or institutional controls, and site owners or responsible parties are to a greater extent now than in the past required to accept the NFA classification.

This year's conference was not only about science and technology. It also included a charity fund-raising component featuring the 4th Annual FRC Charity Golf Tournament.

This year, the goal was to raise \$15,000 to support research on juvenile diabetes. Though the final numbers are not yet in, the effort exceeded its goal through a combination of proceeds from the golf tournament, a silent auction during the conference, and substantial donations by Duke Energy, spearheaded by Terese Dodge, and Walter Kronz, vice president of Advanced Environmental Laboratories.

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Audubon names Wohl as conservation award winner

By **BLANCHE HARDY, PG**

As part of the celebration of Florida's first Everglades Day, Audubon Florida and Henry Glades Audubon presented their first Sustainable Rancher of the Year Award to ranchland stewardship pioneer Jimmy Wohl of the 5,200-acre Rafter T Ranch in Sebring.

The award recognizes a rancher who exemplifies commitment to stewardship and conservation on lands in the Northern Everglades.

Wohl was excited to receive the rancher award, especially considering the significance of it.

He recognized the considerable progress made in creating the depth of partnership and collaboration between agencies, scientists, environmental advocates and agricultural land owners that allowed Audubon to create an award for environmental sustainability, characterizing it as "a monumental step."

Wohl and his Rafter T Ranch have a

long history of implementing cutting edge environmental and water conservation initiatives applicable to working ranch operations and sharing those innovations through participation in programs such as the Florida Ranchlands Environmental Services Project and Payment for Environmental Services program.

Rafter T Ranch is one of eight sites used in the Florida Ranchlands Environmental Services Project.

The FRESPP was launched in 2005 by a consortium of ranchers, environmental groups, state and federal agencies and research scientists to create a collaborative approach to address the water quality and flow issues created by the draining of the Everglades for urban and agricultural development.

The resulting change in hydrology had generated negative impacts ranging from loss of natural fresh water discharge into the ocean to estuarine habitat degradation.

AWARD
Continued on Page 16

Highlands Ranch Mitigation Bank owners drop appeal of controversial permit

By PRAKASH GANDHI

The controversy over a wetlands mitigation bank project in Clay County has come to an end. The backers of the project have dropped their appeal of a decision denying them a permit from state environmental officials.

The move appears to be a win for the Florida Department of Environmental Protection's top wetlands expert, Connie Bersok, who was at the center of a firestorm about the permit.

Bersok was relieved of duty after she objected to the project—a move that put her at odds with DEP's top brass.

At issue was a permit for the Highlands Ranch Mitigation Bank created in 2008

INCINERATOR

From Page 13

When confronted with the jobs and economic benefit they say simply that "106 jobs are just not worth the risk."

No one asked them, so they considered the benefit of the jobs versus a potential loss property values and their peace of mind, and decided job creation is good—but not if it's the kind that may be a detriment instead of a benefit to residents.

On Oct. 15, three months after the county commissions voted to amend the LDRs and two days after a well attended protest rally and town hall meeting, the county commission formally voted against locating the incinerator within the catalyst site, while allowing Integrated Waste Management Systems the option of proposing an alternate site utilizing the full regulatory and public involvement process.

FEDFILE

From Page 2

ability of coal-fired plants to meet the new standards within any short-term time frame is uncertain.

Current advanced cycle coal plants emit 1800 pounds of carbon dioxide per megawatt hour and will need to reduce emissions by almost 40 percent to meet the new levels. No currently available commercial technology makes that possible.

The U.S. Department of Energy has proposed research subsidies amounting to billions of dollars to help power companies develop carbon sequestration technology that is both affordable and effective to meet the new standards.

The new rule has a 60-day comment period. The EPA has scheduled a series of listening sessions across the country.

The current proposed carbon emission standards affect only new power plants. Proposed carbon emission regulations for existing power plants are expected to be out by June 1, 2014.

New exhaust gas cleaning technology for cruise ships. Carnival Cruise Lines and the EPA have reached an agreement under which the cruise line will develop and deploy a new exhaust gas cleaning system for up to 32 of its vessels.

This will meet new requirements in North American and U.S. Caribbean emission control areas where Carnival operates.

The new controls combine the use of sulfur oxide scrubbers and diesel particulate filters. These technologies are already used in power plants and automobiles, but have not been used on marine vessels because until recently they were not bound to meet particulate emission standards under air quality rules.

As implementation of this emission control technology increased, the cost of the technology declined. Its effectiveness has grown so that the cruise ships' emissions may more than meet the new particulate emission standards.

The new standards have a goal of reducing nitrogen oxide emissions by 320,000 tons, particulate matter emissions by 90,000 tons and sulfur oxides by 920,000 tons by 2020.

They were developed jointly by the United States and Canada through an agreement with the International Maritime Organization.

when private equity firm The Carlyle Group formed a joint venture with Hassan & Lear Acquisitions.

They spent \$15 million buying a 1,575-acre pine plantation next to the Jennings State Forest with plans to convert it into a wetlands mitigation bank.

At stake were millions of dollars in wetland mitigation credits that can be sold to governments and developers to offset the wetlands impacts of construction projects.

The owners originally sought a permit with 688 credits from the St. Johns River Water Management District. But only 193 were approved.

Highlands Ranch's owners filed a legal challenge and unsuccessfully tried to get the Florida Legislature to change the rule. The owners then sought a new permit, this time from DEP—one that offered 425 credits. But Bersok refused to recommend that permit be approved.

Then in April, a judge ruled the permit should be rejected. The judge strongly criticized DEP's leadership and supported Bersok who he said gave the only "credible and reliable" testimony.

In June, DEP Secretary Herschel Vinyard agreed with the judge, reversing DEP's decision on the permit because Highlands Ranch "did not provide reasonable assurance" that its approach would work.

The permit seekers took their case to the First District Court of Appeal in Tallahassee, but recently agreed to drop the case.

DEP spokeswoman Dee Ann Miller said the agency concluded that their new performance-driven approach that focused on ecological outcome was permissible.

"However, the criteria in the proposed permit did not provide reasonable assurance of successful implementation of this

approach," she said.

Miller said the department will continue its efforts to enhance the mitigation bank permit process while upholding Florida's stringent environmental standards.

"Evaluating our processes for efficiencies and consistency remains a top priority and the department's employees will continue their efforts of doing the right thing by the rules and statutes that govern its actions, by Florida taxpayers and by the environment," she said.

Officials representing The Carlyle Group said the company had no comment about its decision to drop the appeal.

TBW regional reservoir case ends

Staff report

By a vote of 8-0, the Tampa Bay Water Board of Directors voted in October to pay HDR Engineering's legal fees and costs, totaling about \$21 million, and to end the litigation against HDR Engineering over the failed soil-cement liner in the C.W. Bill Young Regional Reservoir.

The fees include costs for the trial, post-trial proceedings as well as the appeal, and will be paid through funds on hand that will not directly affect consumer water rates.

A fix for the reservoir is underway that will ensure that this key component of the surface water system is reliable.

The facility is expected to be fully operational by the end of 2014.

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AWARD
From Page 14

Initially the FRESP consisted of a six-year pilot project undertaken by eight environmental "pioneer ranchers" including Wohl and the Rafter T Ranch family.

The goal of the pilot project was to establish a compensation program for environmental stewardship that examined the

viability and comparable cost effectiveness of on-ranch water management in an area stretching from South Orlando to Everglades National Park and Florida Bay.

The FRESP team collaborated to design and test schemes that would compensate ranchers for documented water and nutrient retention beyond existing regulatory requirements.

The resulting product is the currently operating Dispersed Water Management Northern Everglades-Payment for Environmental Services program.

Wohl's management of the Rafter T Ranch has demonstrated over more than two decades that agribusiness can flourish in an agreeable and symbiotic accord with nature. The ranch contains numerous wildlife hammocks and wetland habitats incorporated within the improved and native pastures.

In addition, their timber operation is

FLATWOODS
From Page 4

"Some are very simple, like blocking off some of the ATV trails that shouldn't be there in the first place."

The Florida Forest Service is working with the water management districts to block off those trails.

Mike Kemmerer, a wildlife biologist with the Florida Fish and Wildlife Conservation Commission, said the initiative, when completed, will return water flow to close to the way it was intended to be.

"We won't get the flow back to 'normal,' but we will get it close to what it should be," he said. "If we can stabilize some of the water in the Yucca Pens, we will have done a really good job."

Yucca Pens is near the Cecil Webb and Babcock Ranch Wildlife Management areas.

conducted using environmentally conscientious methods including selective harvesting of trees to enhance the growth of the remaining vegetation, subsequently generating new habitats for wildlife, including several endangered species.

Rafter T Ranch has received a number of awards over the years including environmental stewardship awards from the National Cattlemen's Beef Association, the Florida Cattlemen's Association and the Florida Department of Agriculture and Consumer Services.

Flood said that at this point there is no way to tell what the cost will be for the initiative. "So far the South Florida Water Management District has spent over \$380,000 on it," he said.

The initiative is seeking funding from the federal RESTORE Act. Lead Project Manager Steve Sentes of the SFWMD has submitted a proposal to the Gulf Coast Ecosystem Restoration Council for a \$15 million grant.

Flood said that future costs will be borne by the participating agencies.

FDOT is now working on a model in conjunction with its I-75 widening project that will help define more accurately the total cost of the initiative.

LANDFILL
From Page 9

landfill was within the Crystal Spring springshed and determined that Angelo's hydrogeological and geotechnical investigations did not adequately define the landfill's site geology and hydrology and its relationship to the local and regional hydrogeologic patterns, said Burger.

"Based on rules that relate to site stability, Angelo's did not provide reasonable assurance that the environment and human health would be adequately protected," Burger said.

Officials with Angelo's did not return calls for comment. But in the past, the company claimed that there was a low risk to the environment from the project.

"All of the sinkhole data support the low to very low probability of a sinkhole occurrence at the proposed landfill site," the company said a few years ago.

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