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Water, wastewater awards 5

In December, DEP recognized the top public drinking water and domestic wastewater facilities in the state with its 2012 Plant Operations Excellence Awards.

Infrastructure alert 6

The Florida Chapter of the American Society of Civil Engineers released a summary of its second evaluation of the state of Florida's infrastructure. The picture they paint is not pretty.

Aquifer act 8

Florida Leaders Organized for Water has proposed the Floridan Aquifer Sustainability Act of 2013 to address the severe problems that continue to impact North and Central Florida's primary drinking water source.

Panhandle NNCs 9

The Florida ERC approved numeric nutrient criteria for six estuaries in the Panhandle. The new standards set limits for total phosphorus, total nitrogen and chlorophyll.

Canal cleanup 13

After years of development pressure, hundreds of canals from Key West to Key Largo suffer from varying degrees of pollution. Cleanup help is now on the way, funded through grants from DEP and EPA.

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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 us at info@enviro-net.com.

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DEP extends ERP rule revision another six months

By ROY LAUGHLIN

The Florida Department of Environmental Protection prepared a draft revision of rules overseeing the statewide Environmental Resource Permit, but decided to give its staff and those in the water management districts an additional six months to complete efforts associated with rule submission.

According to Dee Ann Miller, deputy press secretary with the department, several aspects of the ERP rule-making process were factors in the schedule extension.

She characterized it as a major rule-making effort involving the participation of several entities—the water management districts, the Florida Fish and Wildlife Conservation Commission, environmental organizations, registered professional organizations, local governments and regulated industries.

"We want to make sure everyone has a chance to participate in the process and provide input," she said.

Provisions of the new rule also need to be integrated into DEP's Applicant Handbook. That takes time and needs to be done before the new rule comes into effect.

In addition, the water management districts have to be ready to issue permits under the new rules.

The proposed rule change contains numerous provisions for specific areas that are within only one water manage-

ment district. But overall, the intent of the revision is to eliminate significant inconsistencies in ERP rules and procedures among Florida's five water management districts, as recommended by a 2011 Florida Senate committee.

During last year's legislative session, HB 7003 passed authorizing rule-making that required DEP to work with Florida's water districts to develop ERP rule consistency across the state.

Thomas Mullin, an associate with the law firm of Sundstrom, Friedman & Fumero in Boca Raton, welcomed DEP's effort to "bring consistency back to the statewide level."

He said that there are currently different criteria depending on where you work in the state.

ERP
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Photo courtesy of Enviro-Equipment

Technicians with Enviro-Equipment Inc. prepare to inject an activated carbon-based slurry into the ground to cleanup contaminated groundwater at a former gas station. The results of the technology are turning heads. See story on Page 12.

Adena Springs Ranch officials await word on downsized water permit application

By MELORA GRATAN

A decision will likely be made in the next few months regarding the fate of a consumptive use permit for a cattle ranch in Marion County that has rustled up opposition from folks worried about environmental impacts due to overpumping and nutrient loading in the watershed.

In the midst of strong public sentiment against its original request for up to 13.2 million gallons a day of groundwater with an 87-center-pivot irrigation system for crops, officials with Adena Spring Ranch submitted a scaled back plan to water managers last month.

The new plan calls for an annual average of 5.3 mgd and a 34-center-pivot system.

The amended application met an extended deadline from the St. Johns River Water Management District to answer questions and requests for more information that included results of aquifer performance tests and a computer analysis of the potential impact of the permit on groundwater levels.

District staff will decide if the permit application is complete by Jan. 13. If deemed so, the application will be forwarded to their governing board for consideration by March 12.

If the application is found to be still lacking, the ranch will have to submit more information by Jan. 13, according to the district's fact sheet on-line.

"We are confident that the district will declare it complete and move for-

ward with processing it and recommend approval to the board," said Honey Rand, spokesperson for Adena Springs Ranch.

"The initial permit request was not going to have a negative impact at the old rate (of water withdrawal), so at the reduced rate, there are no measurable impacts," she said.

Rand added that the project—the brainchild of ranch owner Frank Stronache—will create jobs.

Plus, she said that all the environmental issues are addressed in the permit application, including a comprehen-

sive nutrient management plan.

At the request of the water district, Adena conducted a test to evaluate the potential impact of the proposed water use given the potential for connection between the surficial and Upper Floridan aquifers due to potential karst features by using the district's North-Central Florida Regional Groundwater Model.

The results of the test predict an estimated maximum impact to pumping

ADENA
Continued on Page 14

DEP: Shake-up within Water Resource Division will result in increased efficiencies

By PRAKASH GANDHI

State environmental officials are defending a shake-up in a major division within the Florida Department of Environmental Protection, saying the reorganization will lead to greater efficiency.

The changes at the department's Division of Water Resource Management eliminated the Bureau of Beaches and Coastal Systems and shifted its programs—along with former mining and environmental resource permitting bureaus—to the deputy division director level.

The bureau previously administered coastal development rules along with more than \$582 million in beach renour-

ishment and restoration projects.

The reorganization was criticized by some environmental groups, including the Florida Shore & Beach Preservation Association, whose members include coastal cities and counties.

Officials with the association, which works with local, state and federal agencies to promote effective beach management, could not be reached for comment.

But in a statement, the association described the reorganization as "regrettable," especially when the statewide program to support healthy beaches and their relationship to tourism is critical

SHAKE-UP
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EPA issues new recommendations for recreational water quality criteria

Staff report

The U.S. Environmental Protection Agency recommended tighter recreational water quality criteria, RWQC, for recreational swimming beaches, and fresh and salt water. The new recommendations revise testing methods, criteria values and reporting tools.

Recommended standards include two numerical criteria based on illness rates: either 36 illness cases per 1000 beach users or a more restrictive 32 illness cases per 1000 beach users. The definition of ill-

ness has been changed slightly to include gastrointestinal symptoms without fever.

The new criteria are based on three components: magnitude, duration and frequency, and each of these has different target values. A new pathogen identification protocol, based on molecular genetic identification of microorganisms using the polymerase chain reaction, is part of the new recommendations.

This method will reduce analysis time substantially because a culture is not required.

The recommendations include compo-

nents of an early alert practice for timely public advisory and additional tools to help identify the source of contamination and predict their effect on water quality.

The primary change between the new RWQC and that issued in 1986 is that the current duo applies to both marine and freshwaters. The EPA is also introducing a new term, "statistical threshold value" based on a geometric mean value for the numbers of microorganisms in the water.

In its announcement, the EPA stated that these new recommendations "are intended as guidance in establishing new or revised water quality standards. They are not regulations themselves."

States may adopt stricter standards that are scientifically defensible.

Florida conducts water sampling for pathogens with the support of EPA, which funds the majority of bathing beach surveillance in the state.

Last year, the Florida Legislature essentially ended state funding for beach water quality sampling. The number of sampling sites was decreased and, for those retained under EPA funding, sampling frequency may have been reduced.

The new standards are a result of a consent agreement between the Natural Resources Defense Council and the EPA. They are strictly voluntary and Florida has not yet changed its rules.

EPA approves partial Florida NNC. The EPA formally approved the Florida Department of Environmental Protection's numerical nutrient criteria standards for much of peninsular Florida. The standards set numerical nutrient loading limits for nitrogen and phosphorus in lakes, rivers, springs and some estuaries.

The numerical standards are in large part identical to those EPA proposed in 2010. The DEP retains use of biological indicators as specified in its new rule. This provides continuity with the state's narrative criteria that preceded numerical standards.

The adoption of numerical standards does not immediately influence existing permit requirements. Some of those depend on the original narrative standards.

Setting numerical nutrients standards for Florida waters is not completely over, just this phase of it. DEP recently submitted numerical nutrient standards for Panhandle waters to EPA for approval and adoption.

EPA still has to establish numerical nutrient standards for waters not covered by Florida's rules. These include coastal waters and some estuaries, and waters in South Florida.

EPA will hold public meetings in Tampa, Jan. 17-18, 2013, and web-based public comment sessions on Jan. 22-23, 2013, to address its remaining rule-making efforts.

Development and adoption of numerical nutrient standards are a result of a consent agreement following a federal district court case in which the Florida Wildlife Federation was the plaintiff. That 2009 case set in motion the rules now being adopted by the EPA.

The EPA expects to have the remaining portions of its rules for Florida's inland waters completed by Aug. 31, 2013, and for coastal waters by Sept. 30, 2013.

Facilities fined for CWA violations. Five Florida wastewater treatment plants were penalized by the EPA for failing to submit biosolids reports or logging other infractions under Section 503 of the Clean Water Act. Section 503 covers land disposal of sewage sludge.

The cities of Cape Coral, Winter Springs and Haines City received minor fines of \$900.

MacClenny will pay a civil penalty of \$4000, while the Tohopekaliga Water Authority will pay a civil penalty of \$7000.

Violations occurred during the 2012 federal fiscal year.

No Florida entities were cited for violations of stormwater-related activities. Because of the extension of stormwater standards to construction sites, Florida contractors were frequently cited in this list in prior years, but not in 2012. In addition, no Florida municipality was cited for unauthorized discharge of sewage either.

Leadership appointments. EPA Administrator Lisa P. Jackson appointed new chairmen to two of the agency's independent scientific advisory committees.

Dr. David Allen is the new chair of the EPA's Scientific Advisory Board and Dr. Christopher Frey was appointed as the chairman of the Clean Air Scientific Advisory

Committee. Both men are engineers.

Allen is the Gertz Regents Professor of Chemical Engineering, and director of the Center for Energy and Environmental Resources at the University of Texas, Austin.

Frey is a professor of civil construction and environmental engineering at North Carolina State University in Raleigh. His research interests include quantitative methods of risk analysis, technology evaluation and air pollution emissions. Frey is a past president of the Society for Risk Analysis.

Both of the committees these chairmen will head are independently chartered. The committees' role is to provide the EPA administrator with scientific and technical advice. Each of the new chairmen will serve a two-year term.

Supplemental EIS for aircraft in Jax. In 2008, when the U.S. Navy submitted its final environmental impact statement for home-basing its P-8A aircraft, Naval Air Station Jacksonville was designated as a base for five fleet squadrons. Four fleet squadrons have been based at Whidbey Island, WA, and three more at the U.S. Marine Corps Base in Kaneohe Bay, Hawaii.

Due to evolving requirements, the Navy is proposing to reduce the number of bases to two sites. NAS Jax and Whidbey Island will become the new home-based locations for these aircraft. In Jacksonville, the additional staff and aircraft will not require new facilities.

The Navy published a notice of intent to prepare a supplemental EIS for P-8A basing. According to the press release, preparing the supplemental EIS is a prelude to making a decision to reduce the number of home bases. The EPA expects to release the draft supplemental EIS in the summer of 2013, followed by a 45-day public comment and agency review period.

Public meetings are planned for Jacksonville during the public comment period.

Link between water use, energy consumption. About an eighth of the country's energy consumption in 2010 was used to capture, move, treat, heat and pressurize water.

These conclusions are from "Evaluating the Energy Consumed for Water Use in the United States," an article recently published in *Environmental Research Letters*, authored by a team of researchers at the University of Texas, Austin that included Kelly T. Sanders and Michael E. Webber.

The researchers relied on data from the U.S. Energy Information Agency, the U.S. Department of Energy, the Electrical Power Research Institute and private sources.

They tallied water-related energy usage in the residential, industrial, power and commercial sectors. These four user groups comprise 70 percent of the overall power use in the country.

The report differentiates between pri-



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Universal Solutions sues to continue DeLeon Springs cleanup

Staff report

A lawsuit could delay cleanup of petroleum contamination in the Central Florida town of DeLeon Springs. Universal Solutions, the company that's been doing cleanup work there, filed suit against the Florida Department of Environmental Protection, seeking control the next phase of cleanup under U.S. Highway 17.

DEP considered the cleanup of the site to be a high priority. A plume of gasoline contamination migrated at least 400 feet westward. The site, now a Valero station, is less than a mile away from the springs, with the plume moving that way.

The state is now paying for the cleanup under their Early Detection Incentive program, which granted amnesty to owners of contaminated sites. The state designated the site as an imminent threat in 2008, endangering the springs and nearby residents.

Universal Solutions performed the cleanup at the station, completed in 2009, and at a property across the highway this past August.

In October 2011, Universal Solutions submitted to DEP a scope of work, traffic management plan and cost proposal for the Highway 17 cleanup phase.

DEP then issued a request for statements of qualifications from other contractors to do the work. The suit alleges this is outside the scope of DEP's authority.

The company has a clear legal right to enter into work orders with DEP to perform the work, the complaint states, and Universal Solutions is asking a judge to order DEP to cooperate with the next phase of the cleanup.

The department said it is not required to work with the contractor, stating that there is no rule or law that requires DEP to work with a particular contractor.

Superfund test results. The latest tests show that a multi-million dollar remediation effort has dramatically reduced the amount of harmful chemicals in the ground in Davie.

The Florida Petroleum Reprocessors plant was among the worst sources of industrial pollution in South Florida with workers having poured waste oil directly onto the ground and dumped contaminated water into an unlined pit.

In 1992, the plant—in an industrial area just east of Florida's Turnpike—was shut down. It became a federal Superfund site.

The latest groundwater samples showed that the deep underground plume of vinyl chloride and other pollutants had shrunk from 860 to 473 acres. There has also been a decline of more than three-fourths in the total mass of chemicals in the ground.

The plant operated under various owners and names over the years. When the last owners couldn't pay for the cleanup, it became part of the Superfund program.

A group of 52 companies and government entities banded together in the late 1990s to reach an agreement with the U.S. Environmental Protection Agency to settle their liability.

The cleanup agreement allowed all parties to focus on removing chemicals from the ground instead of fighting over who should pay for it.

After the contamination was discovered, the city of Fort Lauderdale shut down part of a wellfield north of the plant for fear the contamination would spread to it.

The groundwater will be sampled again in 2015 to make sure the chemicals continue to break down into harmless substances.

More layoffs at DEP. DEP recently laid off 24 workers in its Tallahassee offices. The cuts are in the department's Division of Water Resource Management. The division handles water programs that include beaches, mining and the Everglades.

The job cuts came shortly after the department terminated 25 employees working out of its Tampa district office. That move was part of a reorganization plan set to be extended to the department's regional district offices throughout the state.

WTE plant reopening delayed. The reopening of Bay County's waste-to-energy facility is stalled.

The facility was badly damaged by a fire in February that destroyed one of the incinerator's buildings and heavily damaged another, forcing management to replace all of the equipment inside.

Officials hoped to open the incinerator by mid-December.

Ormond Beach brown-field.

The city of Ormond Beach is considering designating a stretch of beachside land as a brownfield redevelopment zone.

The designation would be an expansion of the brownfield area that covers 398 acres and 418 parcels from Old Kings Road to Beach Street. It also includes most of Granada Boulevard that runs through the area.

Under Florida's brownfields redevelopment program, targeted businesses looking to develop in the area could be eligible for voluntary cleanup tax credits for cleaning up a brownfield site, sales tax refunds on building materials used in construction, low interest loans and a \$2,500 tax refund for every job to target industries that create a

minimum of 10 full-time jobs.

Statewide, 319 acres have been designated under the brownfields program. Last year, 8,084 new jobs were created under the program, according to the DEP.

Palm Beach grant. Palm Beach County has submitted an application to the U.S. Environmental Protection Agency's brownfield program for a revolving loan fund grant in the amount of \$1 million.

The program will target the Glades Region of Belle Glade, Pahokee and South Bay, as well as the city of Riviera Beach. These areas combined have an average poverty rate of 32 percent.

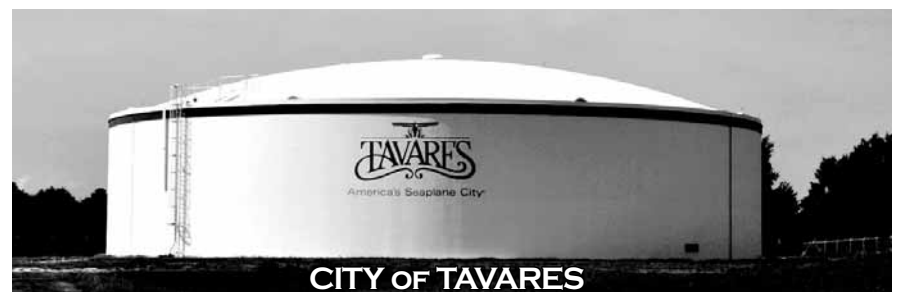
Up to \$200,000 of the RLF will be available to each project for the cleanup of identified brownfields sites for business and housing redevelopment.

The county plans to loan 70 percent of the RLF with the remainder to be awarded to sub-grantees. The county also plans to solicit potential projects from lending and real estate communities, developers, local

NOTES
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Florida Notes

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NWFWMMD okays grant to improve Port St. Joe drinking water system

Staff report

The Northwest Florida Water Management District Governing Board approved a \$106,000 grant that will allow the city of Port St. Joe to replace a diesel engine that powers the city's primary water supply pump.

The district action insures that the city can maintain two operational pumps at its Chipola Pump Station and a reliable drinking water supply with appropriate backup capability.

Paul Thorpe, director of the water district's Planning Section, said the pump station repair is consistent with their Regional Water Supply Plan for Gulf and Franklin counties.

That plan seeks to identify surface water as the preferred alternative water supply source for Port St. Joe.

Funding for restoration. The Florida Department of Environmental Protection expanded its efforts to restore Silver Springs and Kings Bay by earmarking \$2.5 million for water quality improvement projects.

DEP Secretary Herschel Vinyard said support from the governor and Legislature has aided the agency in directing \$11.5 mil-

lion toward restoring Florida springs over the last three years.

Through department research and monitoring, both Silver Springs and the Upper Silver River have been designated as impaired with nitrates, a form of nutrient that can cause algae problems.

Currently, DEP is determining the total maximum daily load for nitrates. They are aiming for 0.35 milligrams per liter, the same restoration level that the U.S. Environmental Protection Agency has adopted for springs.

DEP plans to develop a formal management plan to reduce nitrate inputs. That will require local involvement to identify specific actions that stakeholders must take and a schedule for carrying out those actions.

DEP began taking steps in July to restore the springs' water quality. A \$1 million investment in wastewater projects was identified in conjunction with Marion County and the St. Johns River Water Management District.

The first project will redirect current discharge from the Silver Springs Regional Wastewater Treatment Plant, just 1.5 miles from the main boil of Silver Springs. The discharge would be routed to the Silver Springs Shores Wastewater Treatment Plant 10 miles away.

Another major project is a \$1.1 million reuse plan at Kings Bay near Crystal River. Jointly funded by the Southwest Florida Water Management District and the city of Crystal River,

700,000 gallons of reclaimed water will be sent from the Crystal River wastewater treatment plant to the Progress Energy Citrus County Power Complex.

That move will reduce wastewater nutrient loading to the local springshed by 16 percent and increase spring flow to Kings Bay.

Water partnership. The North Florida Regional Water Supply Partnership Stakeholder Advisory Committee has revised a work plan on preserving water resources

to conform to objectives now being formulated by the Suwannee River and St. Johns River water management districts.

In a late October meeting, the partnership outlined 15 key elements that comprise the development of a regional water plan. The group wants to incorporate their ideas with the goals of the two districts.

Jeff Blair, facilitator for the stakeholder advisory committee, said district staffs have compiled a work plan on regional water supply.

The original plan of the committee was pieced together months ago, but in September, committee members asked that the work plan be revised to mirror the plans of the water management districts.

Carlos Herd, Suwannee River Water Management District's director of water supply, presented a map to partnership members in September showing the areas in the two districts that will be impacted. It stretches from St. Johns County on the Atlantic Coast inland to Suwannee County.

The new map includes a larger area because stakeholders wanted to be sure all resource caution areas are considered.

Suwannee district LIDAR. The Suwannee River Water Management District is using light detection and ranging technology to map ground elevations throughout its territory.

Erich Marzolf, water resource division director at SRWMD, said use of the technology enhances the district's ability to identify flood prone areas, plan land management activities and develop water storage and recharge projects.

LIDAR is an optical remote sensing technology that can measure ground elevation from an airplane. A rapid collection of light points, over 150,000 per second, is aimed at the ground surface. The light is reflected back and a digital elevation model of the ground surface is created.

About 70 percent of district's 5,510 square miles had been mapped as of late in the year using LIDAR technology.

The mapping project is being conducted by the district in partnership with the U.S. Geological Survey.

Port St. Lucie water storage. The city of Port St. Lucie is taking steps now to find ways to satisfy water needs well into the 21st century.

This fall, the Port St. Lucie City Council discussed the possible annexation and purchase of 3,107 acres of land for use in capturing stormwater runoff and storing it to meet long term water needs.

It is projected that Port St. Lucie will need to provide water for 400,000 customers by 2060.

The land in question is the McCarty Ranch property near Glades Cutoff and Range roads, outside city limits.

The first step for the city is to approve the purchase and acquire the land: annexation will follow.

If acquired, the land would be surveyed and water samples would be assessed over the next 13 years. Following that, a surface water treatment facility would be built, possibly operational by 2040.


Utilities Systems Director Jesus Merejo told council members that water demand will increase from 50 to 70 million gallons a day when the city is totally built out, so alternate sources of water will be needed.

Since 1999, he said 80 percent of Port St. Lucie's water has been drawn from the Floridan Aquifer. Merejo called the aquifer a "finite resource." As time goes by, permitting to draw more water from it will become more difficult.

He said action now by the city will help avoid "water wars" with other communities drawing from the aquifer.

Seminole County drinking water upgrade. Seminole County will spend \$17 million to improve drinking water for residents and meet U.S. Environmental Protection Agency standards.






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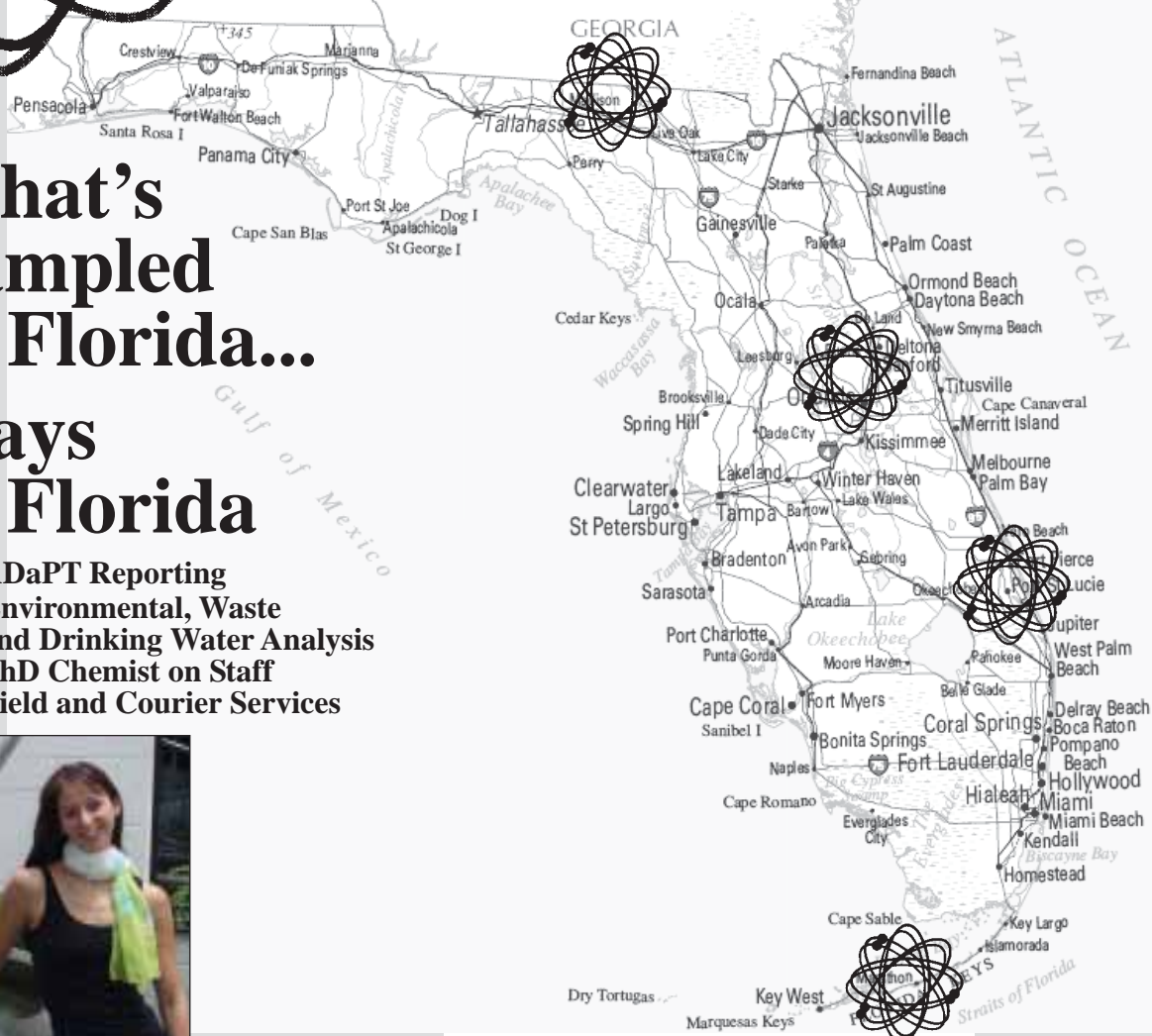
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WATCH
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DEP recognizes top water, wastewater facilities throughout Florida

By PRAKASH GANDHI

Water and wastewater facilities throughout Florida have been recognized by the state for their excellent performance. The Florida Department of Environmental Protection announced the winners of their 2012 Plant Operations Excellence Award.

The Type I domestic wastewater treatment facility award for the Southwest District went to the city of Dunedin's Wastewater Treatment Facility. The plant was praised for providing outstanding pollution control and customer service.

Dunedin has joined a cooperative effort with Pinellas County and the surrounding counties called The Pinellas County Training Consortium. This cooperative enables its staff to meet with other staffs in the area to discuss topics related to wastewater treatment.

The Type I domestic wastewater treatment facility award for the South District went to the Bonita Springs Utilities East Water Reclamation Facility.

The plant has developed a procedure that solved a widespread problem through the industry with cyclic valve failures. A proactive operations and maintenance program has resulted in effluent that exceeds quality standards.

The Type I domestic wastewater treatment facility award for the Southeast District went to the city of Key West's Richard A. Heyman Environmental Pollution Control Facility.

Facility operators frequently provide plant tours to interested parties and have created public service announcements that air daily on local radio stations. These efforts increase public education and citizen awareness about protecting near-shore waters, wastewater treatment and environmental protection.

The Type I domestic wastewater treatment facility award for the Central District went to the Winter Park Estate Wastewater Treatment Facility.

DEP says the plant supplies consistent, high quality reuse water for irrigation of the Interlachen Golf Course, Winter Pines Golf Course, Showalter Field and Glen

Haven Memorial Cemetery.

The Type II domestic wastewater treatment facility award for the South District went to the city of Marathon Area 5 Wastewater Treatment System.

The system underwent an extensive process modification and capacity upgrade from a 0.16 mgd sequencing batch reactor with tertiary filtration to the current 0.45 mgd Kubota submerged membrane unit with biological nutrient removal.

The Type III domestic wastewater treatment facility award for the South District went to the Northlake Estates Recreational Vehicle Park, located in Glades County.

In 2012, many improvements were achieved over a two month period, including converting a 12,000-gallon effluent holding tank to a 4,200-gallon chlorine contact chamber.

The Military Point Advanced Wastewater Plant in Panama City also received an award.

DEP's water division also announced the winners of their 2012 awards.

The program judges three size categories within each plant type: facilities that serve fewer than 3,300 customers, facilities that serve from 3,300 to 50,000 customers and facilities that serve more than 50,000 customers.

Facilities undergo a rigorous judging process, with each aspect of their operation closely scrutinized. Facility upkeep is paramount, and facility personnel have to make sure they are up to date with all the certifications and training on the latest water monitoring rules and technologies.

The winner for the large community water treatment plant award in the Central District is the city of Ocala Water Treatment Plant.

DEP officials said the city has a long history of being compliant with the agency.

The winner for the medium community water treatment plant award is the city of Clermont East Water System.

In addition to participating in an outreach program to encourage public education and involvement, the city maintains volumes of information on its website.

In 2010, the city implemented an advanced infrastructure metering system de-

man's Wharf parking lot off U.S. 98. Work on the repair was due to start in December.

Public Service Director Steve Schmidt said that, until repaired, all the water flowing through is untreated. When functioning properly, the separator spins water as it flows through, filtering out sediments, trash and large debris before it drains into the harbor.

The city attempted to repair the filter two years ago, but the project was never completed because of a "permitting glitch" and lack of funding.

Monroe voters okay wastewater work. Monroe County voters approved an extension of a local one-cent sales tax until 2033, allowing the county to move forward with design and construction on the Cudjoe Regional Wastewater System.

Voters also approved a measure to have the local electorate select members of the Florida Keys Aqueduct Authority board instead of the governor appointing them.

The extension of the penny sales tax would generate about \$13 million annually for the county, \$5 million for Key West and \$2 million each for Marathon and Islamorada.

In addition to the Cudjoe project, funds will be used for parks and other capital projects.

Spring named to district board. Samuel "Bo" Spring was named to the governing board of the Northwest Florida Water Management District.

The appointment was announced by the governor and is subject to approval by the Florida Senate.

Spring is the managing partner of Big Fish Construction LLC and Cape Concrete LLC. He is also director of the Port St. Joe Downtown Redevelopment Agency and chair of the Gulf County Planning and Development and Review Board.

signed to collect meter usage data and remotely transmit the information.

The winner for the small community water treatment plant award in the Central District was the city of Leesburg's Royal Highlands facility.

DEP praised the city for their efforts to operate and maintain their water treatment facilities in accordance with DEP rules and regulations.

The winner of the large community


water treatment plant award in the Northeast District was the city of Palm Coast Water Treatment Plants 1, 2, and 3.

The city owns and operates three water plants that are interconnected within the distribution system, and serve a community of 77,810 people with excellent water quality.

AWARDS
Continued on Page 13

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ASCE-FL paints bleak picture of current condition of state infrastructure

By ROY LAUGHLIN

The Florida Chapter of the American Society of Civil Engineers released a summary of its second evaluation of Florida's infrastructure. From coastal areas to water and sewer categories, the state's grades have dropped in most of the 11 infrastructure categories rated.

Some drops are significant: coastal areas (controlling erosion and building wind resistant structures) has dropped to D-; flood control to D+.

The best grades went to aviation, B-, and to bridges, B.

ASCE-FL infrastructure ratings included the following categories: aviation, bridges, coastal areas, energy, flood control, highway, ports, schools, stormwater, transit, and water and sewer. These are diverse categories, some of which have engineering practices that share little in common with other categories.

In many, but not all, evaluation panels singled out reductions in, or lack of, state funding as major contributors to low infrastructure scores.

For example, the report said that forecasted capacity needs in aviation over the next five years (new runways, terminals and baggage system expansions) will require long-term commitments from a healthy

funding stream. In energy, the report said that, compared to states of similar gross domestic product, Florida is lagging behind in funding all stages of clean technology production.

Lack of assured funding is swamping flood control, which received a D+ grade. Approximately \$750 million is needed over the next 10 years for capital improvements and long-term maintenance programs to support flood control, said the report.

The report noted that current revenue sources are not sufficient to fund long-term transportation needs, suggesting that fiscal conservatism will drive Florida's roads to lower ratings over the next few years.

Education infrastructure, which for a generation has been underwater, received a D+, one of the lowest grades of any category.

Some infrastructure categories are only peripherally compromised by lack of funding. But water and sewer, for example, may lose its C rating if asset management does not receive appropriate attention.

The panel also noted the lack of fresh water supplies in many parts of the state, and the failure to identify and develop alternative water supplies.

The ASCE-FL panel identified lack of "provisions for infrastructure improvements to deal with sea level rise" as a defi-

ciency, earning the state an average rating for its infrastructure. Ports and transit were also graded as C for failure to adequately address anticipated future demands for those facilities.

The infrastructure ratings cover all of Florida's facilities. A poor grade in a category does not mean that all facilities in a category are equally bad, or all those in a category with higher scores are of equal or superior quality.

Eric Czerniejewski, PE, one of the report's organizers, explained with the following example: All the highways and roads in the state were rated in one group. Florida's interstate highways and most of

it state highways are in much better shape than county and municipal roads. It was the condition of roads in the latter subsets that brought the category grade down.

This fall, ASCE-FL released a summary of its most recent evaluation. Most of the data for this iteration of infrastructure evaluation was collected in the first part of the 2012 year.

A larger document with more details of data sources and evaluation methods and other details will be released in January, 2013.

The report on Florida's infrastructure will become part of ASCE's evaluation of the nation's infrastructure.

Lee County, SFWMD complete work on Lakes Regional Park restoration

By DAN MILLOTT

After a series of stops and starts, a water project upgrading the lakes at a South Fort Myers Park is finally complete.

Anura Karuna-Muni, PE, Lee County's project manager for the Lakes Regional Park project, said the waterbodies within the 239-acre park cover about 150 acres.

Karuna-Muni said the U.S. Army Corps

of Engineers and Lee County began working on developing the lakes within the park in 2001. But the corps ran out of money so the project laid dormant for years.

He said Lee County and the South Florida Water Management District decided to revive the plan five or six years ago and began working toward that end.

The first concrete action came in 2009 when the county and the district allocated \$350,000 to hire a consultant to do design work for a filter marsh flow-way. The next step was a two-year permitting process after the design was complete.

Karuna-Muni said the project went out for bids in November, 2011 and the contract was awarded in February, 2012. The job was completed this past October.

Total construction cost was \$2.3 million with \$600,000 coming from Lee County and \$1.7 million from the SFWMD and the Florida Department of Environmental Protection.

The purpose of the project as outlined by Lee County was to improve water quality in Lakes Park through the design and permitting of a 40-acre filter marsh. The completed project will improve surface water runoff quality by creating a marsh flow-way that acts as a natural filter to clean nutrients from the lake.

The project should reduce nutrient loadings and maintain proper elevations in the lake. That should help control the aquatic and upland exotic plant species and improve the native habitat.

Before the project was launched, the Lee County Health Department had concerns about the water quality in the beach area adjacent to one of the original lakes created from an abandoned 1960s rock mine.

The lakes in the park are at the headwaters of Hendry Creek. The runoff from the lakes discharges directly into the creek, considered an impaired waterbody. The completed project is expected to benefit the entire Estero Bay Aquatic Preserve.

When construction began, Lee County brought in 200,000 cubic yards of fill to help build a river-like system within the two northernmost lakes. Each of those lakes has berm-like fingerings forcing the water to flow in an S-shape.

The sloped banks allowed for the planting of wetland vegetation that creating a pollution filtering system.

Restoring proper flow rates should control harmful algae blooms within the park. That should help improve the propagation of fish and other aquatic wildlife.

In the years since Lee County purchased the site and since converting it to a regional park in 1984, extensive residential and commercial development has grown up around it.

Brad Cornell, an Estero Bay Agency on Bay Management member on behalf of Audubon of Florida, said water projects that slow water flow would help improve water quality and quantity throughout the year.

"We recognize that we need to restore water flows and get water flowing the right way," he said.

"One of our objectives is to increase storage in shallow water marsh areas, which is habitat that we've lost over decades to agriculture and development."

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Advocates weigh in on statewide transportation corridor planning

By **BLANCHE HARDY, PG**

The Florida Department of Transportation has resurrected plans to develop transportation corridors connecting the state's metropolitan growth centers.

Between 1990 and 2000, Florida's population grew by 23.5 percent, a trend that continued well into the following decade. In 2006, near the end of former Gov. Jeb Bush's administration, FDOT published their "Future Corridors Action Plan" to facilitate the projected growth.

But until the existing administration assumed office, the plan was shelved in favor of maintaining and expanding existing infrastructure in response to the economic downturn.

With economic recovery now underway, FDOT is projecting a 33 percent increase in population, 35 percent increase in tourism and 39 percent increase in freight tonnage by 2035. The department has identified five broad transportation corridors to address this growth.

Corridor studies were initiated in 2012 for Tampa Bay through Central Florida to the Space Coast and for Tampa Bay to Jacksonville in the Northeast. Future corridor studies are planned for other regions in the state.

This fall, environmental conservation groups met with FDOT in Tallahassee to discuss their plans, said Charles Pattison, president of 1,000 Friends of Florida.

In addition to 1,000 Friends, conservation groups attending the meeting included the Sierra Club, Audubon, the Nature Conservancy, Defenders of Wildlife, Conser-

vancy of Southwest Florida and the Florida Wildlife Federation.

The groups are concerned about federal, state and private conservation, rural and agricultural lands within and adjacent to the broad corridor study areas, and how these lands may be impacted by the proposed transportation infrastructure and resulting urbanization.

The groups want to know what FDOT's priority study areas are and what the basis will be for determining what's appropriate in these areas, according to Pattison. The environmental advocates want to assure that the corridors will accommodate alternative modes of transportation such as passenger rail as well as roadways.

FDOT confirmed the proposed corridors are being evaluated with multiple transportation, transit and utility uses in mind. Pattison indicated that FDOT is "re-vamping" the 2006 study to produce a "more enlightened attempt to deal with transportation issues throughout the state."

FDOT has publicly identified three major reasons for considering the corridors. In addition to addressing growth projection demands, the department recognizes the role transportation connectivity can play in supporting economic development opportunities, noting that forecasts indicate Florida will compete globally as an integrated "mega-region" in the future.

The department wants to improve connectivity with other states to enhance the state's hub status for trade and manufacturing.

The corridors are also being proposed as gateways for the creation of new parallel facility sites to provide alternatives to

existing congested roads. The transformation of portions of existing facilities to tolled express lanes or truck-only lanes is also under consideration.

1,000 Friends of Florida sent a letter to FDOT Sec. Ananth Prasad after the November meeting thanking the department for the briefing, and providing observations and first impressions about the guiding principles important to the corridor planning process.

Highlights of the letter include: recommendations to prepare concept and feasibility studies in accordance with "How Shall We Grow?" regional vision planning

and Florida Transportation Plan policy governing regional mobility and enhanced mobility for people and freight; FDOT-funded preservation of environmental systems identified within a regional vision plan within ten miles of proposed new corridors; construction of new local roadway networks prior to interchange construction; fifteen mile intervals between interchanges; and reaching a Level of Service D on 80 percent of existing parallel lane miles prior to constructing any new corridor facility.

The conservation groups plan to meet again with FDOT next month to continue discussions.

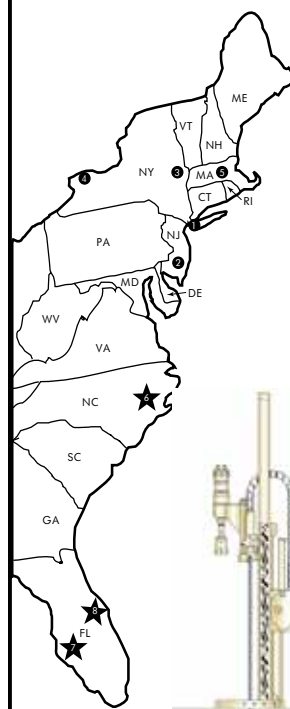
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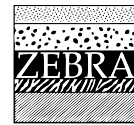
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Report forecasts significant forest loss due to suburbanization, land fragmentation

Staff report

A comprehensive U.S. Forest Service report released last month examines the ways expanding populations, increased urbanization and changing land-use patterns could profoundly impact natural resources, including water supplies, nationwide during the next 50 years.

The study shows the potential for significant loss of privately-owned forests to development and fragmentation that could substantially reduce benefits from forests that the public now enjoys including clean water and wildlife habitat.

U.S. Forest Service scientists and partners at universities, non-profit organizations and other agencies found urban and developed land areas in the U.S. will increase 41 percent by 2060. Forested areas will be most

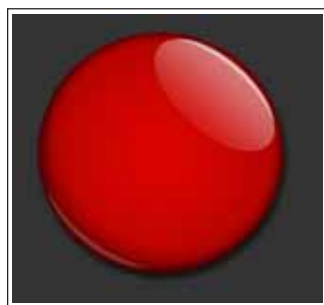
impacted by this growth, with losses ranging from 16 to 34 million acres in the lower 48 states. The study also examines the effect of climate change on forests.

Over the long-term, climate change could have significant effects on water availability, making the U.S. potentially more vulnerable to water shortages, especially in the Southwest and Great Plains.

Population growth in more arid regions will require more drinking water. Recent trends in agricultural irrigation and landscaping techniques also will boost demands.

The assessment's projections are influenced by a set of scenarios with varying assumptions about U.S. population and economic growth, global population and economic growth, global wood energy consumption and U.S. land use change from 2010 to 2060.

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White Springs mayor leads support for legislation to protect the Floridan

By SUSAN TELFORD

The city of White Springs' namesake may have dried up over two decades ago, but the city's mayor is now the driving force behind proposed legislation to protect the Floridan Aquifer system.

Dr. Helen Miller, mayor of White Springs and vice chair of Florida Leaders Organized for Water (FLOW), said the proposed Floridan Aquifer Sustainability Act of 2013 is based on over two dozen resolutions and input from the public concerned about severe water problems that continue to plague North and Central Florida.

"We have a huge water problem that impacts life as we know it," she said. "Florida has endured 150 years of ecotourism, hunting, boating and fishing—all of which has taken its toll. We need to think about the future and how it will be 150 years from now."

Miller never intended to take on the role as advocate for the aquifer system, but at the urging of Vice Mayor Walter McKenzie, felt they had to do something to protect the state's natural resources, beginning with the a plan for long-term sustainability to protect the aquifer that Florida shares with neighboring states.

"I was already dealing with community (issues)," she said. "I had my hands full and thought, what can a mayor of one of the poorest towns in the state with a minimal budget do?"

"But then I started reading the scientific studies and information put together by the staff of the St. Johns River Water Management District. Then, I read the conclusions of the studies—and they didn't match," she said.

"The way the conclusions of the studies were written was politically driven—contradicting the scientific information provided by staff, yet granting the (permits)," she said. "There's a severe problem and I felt it needed to be addressed. JEA makes a \$200 million profit using our water for free, while making millions, leaving us polluted water. We're getting screwed. It's a water quantity and quality issue. We all share the same aquifer."

Miller knows that in order for the proposed legislation to work it has to have some teeth so that it can't be manipulated by politicians concerned with their personal financial interests. In addition, all of the water problems have to be addressed: nutrients from runoff, algae and salt-water intrusion. Then there's the approach.

"We need a statewide water policy. And we have to work with adjoining states because we share the aquifer," she said. "The

approach we're taking is with mayors and commissioners who are elected by the people of the state. That's what we decided at the beginning of FLOW—an inter-local agreement amongst elected officials trying to figure out what to do to best represent the people of Florida. Too many politicians are only concerned about today's bottom line, not our future. We need to take a stand and protect our natural resources—starting with water and energy."

According to Miller, the state's water management districts have had the authority to address water quality and quantity issues, but have not been told to do it. The proposed legislation requires that each water management district develop and implement permanent solutions and return sustainability, while addressing statewide water systems.

The Florida Department of Environmental Protection and the state's five water districts would also be required to review water permits of 100,000 gallons or more per day to determine whether they are causing adverse effects to the aquifer or significant harm to springs, lakes and rivers. The harm would require immediate mitigation and a five-year elimination plan.

"Their mitigation plans have no timeline," said Miller. "This legislation will require the districts to get the job done, and it will get them the money needed to do the job."

Miller said the proposed legislation arose from resolutions adopted earlier this year by the Northwest Florida League of Cities and Suwannee River League of Cities, calling for review of permits that affect spring flows in the region.

The legislation also directs the DEP to proceed with studies to develop a uniform model of the Floridan Aquifer. It was originally proposed that the model would use 1980 as a pre-development baseline, but data is still being collected and that date may change.

White Springs was once considered by the Timucuan Indians to be sacred healing grounds where warring tribes could come to bathe and drink the mineral waters, while putting differences aside.

It later became a worldwide destination served by an active railroad system with a bathhouse where visitors sought to restore their health by swimming in the healing waters. Miller has seen first hand what happens when the natural resources are not protected.

"We need to take a stand and protect our natural resources before we don't have any. It's about our future. Without clean water and energy, we have nothing," she said.

Arsenic in groundwater at Boynton Beach golf course under study

By MELORA GRATIAN

Although plans to redevelop an area used as a public golf course in Boynton Beach have been nixed, city officials must nevertheless address significant arsenic contamination in the groundwater that was uncovered during environmental assessments completed around five years ago.

The city has leased the property that spans about 150 acres from Palm Beach County since building The Links at Boynton Beach in the 1980s. Officials were considering relocating the golf course to city property once used for a landfill and developing affordable housing on the land.

"However, the city (leadership) turned over and the housing market collapsed, so they didn't pursue it," said Paul Wierzbicki, PG, professional geologist III with the Florida Department of Environmental Protection's Southeast office in West Palm Beach.

"We reminded them of those outstanding issues (with the arsenic) and they have provided a site assessment report and amended report," he said. "We have assur-

ances the water system is protected since the potable water system is the city's system and soil contamination isn't an issue. We now just want reasonable assurances that the contamination doesn't extend off the property."

The state limit for arsenic in groundwater is 10 parts per billion. The assessment found concentrations within the golf course boundary ranging from below detection limits to 460 ppb, as well as one sample of more than 3,500 ppb.

The levels are consistent with what the state would typically encounter on property used as a golf course, Wierzbicki said.

City officials are working to provide the state with assurances that off-site migration isn't occurring within a 60-day time frame, according to Erik Schmitt, an environmental specialist with DEP. Schmitt added that since the property will remain a golf course, there is no direct exposure to the soil so the arsenic levels are appropriate.

Although it is premature to speculate on the exact nature of remediation measures that will be used, Wierzbicki said that monitoring will certainly play a large role in the future efforts.

DEP finalizes numerical nutrient criteria for Panhandle estuaries

By ROY LAUGHLIN

The state Environmental Regulation Commission approved numeric nutrient criteria for six estuaries in Florida's Panhandle: Perdido, Pensacola, Choctawatchee, St. Andrews, St. Joseph and Apalachicola bays.

The new standards set limits for total phosphorus, TP; total nitrogen, TN; and chlorophyll.

Each estuary has its own set of values and in many cases estuaries are divided into segments with different values for each one.

Typically, TP is in the range of 0.010 - 0.050 milligrams/liter. TN values are typically in the range from 0.5 to sometimes more than 1 milligram/liter. Chlorophyll values range from approximately 3 to more than 17 micrograms/L.

The standards were based on multi-year measurements beginning in the mid-1980s and are expressed as annual geometric means. This calculation method lessens the influence of episodically high values that may occur due to seasonal rains or water column stratification.

Numeric nutrient standards for Panhandle estuaries will not have to be ratified by the Florida Legislature, and are expected to be sent to the U.S. Environmental Protection Agency by the end of the year, said Daryll Joyner, chief of the DEP's

Bureau of Assessment and Restoration Support. The EPA could ratify them within 60 days, so they could be effective as soon as next spring.

With standards now established for about 75 percent of Florida's estuaries, the focus shifts to some of the remaining rivers and streams in Florida.

"Where the street fight is happening is with canals and rivers," said David Guest, managing attorney for Earthjustice's Florida office. "The numbers to restore estuaries are not in dispute," he said.

Guest characterized the divergence between proposed values for nutrient standards in rivers, streams and canals as "a huge zone."

In other rulemaking related to eutrophication in estuaries, DEP is proposing a seven-day and 30-day minimum oxygen saturation standard of 51 and 57 percent saturation, respectively. These oxygen saturation values are based on juvenile fish survival and recruitment.

The proposed standards apply to all Florida estuaries. The proposed dissolved oxygen standard contains a little wiggle room for regulation.

DEP includes, as part of its triennial review, a more detailed set of standards for minimum oxygen saturation in Florida's fresh waters. Comments in this article describe only the proposed standard for es-

tuaries.

Approval from the state's Environmental Regulation Commission is the next step in the rulemaking process for proposed minimum dissolved oxygen standards.

"We were scheduled to bring them to the December ERC meeting. But we got comments from the public on Nov. 30 during an extra workshop," said Joyner. "Now we're shooting for the Feb. 21 ERC meeting."

"I'd like to add that the triennial review is broader than just dissolved oxygen and

human health effects but these are the most important (water quality issues). I wouldn't want anyone to think that these are the only changes (resulting from the triennial review)."

Because they influence activities in all Florida estuaries and the standards directly contribute to ecosystem health and human benefits directly accruing from environmental health, DEP's 2012 triennial review of the standards should make lasting improvements to Florida's surface water quality.

Local governments band together to pursue brownfield grant

By MELORA GRATTAN

Alachua County officials are working with colleagues in four city governments in an effort to secure federal funds for assessing brownfield sites.

They hope to eventually revitalize defunct areas and turn empty buildings into vibrant new places for the community to gather for recreation, entertainment and business.

A coalition of representatives from the county and the cities of Alachua, Hawthorne, Waldo and Newberry recently submitted an application for a brownfield assessment grant.

Awarded by the U.S. Environmental Protection Agency, the grant could provide up to \$600,000 to conduct Phase I and Phase II environmental site assessments on properties believed to be contaminated.

"We worked with the cities to determine sites that could be submitted and found about 25 as an initial inventory," said Edgar Campa-Palaflox, the county's economic development coordinator.

The sites will be prioritized in terms of those that have more economic potential and those with the most possible impacts to human health, such as a former gas station site that is close to drinking water wells.

While this is the first time that the county has applied for this grant, it is not a stranger to brownfields and related state and federal programs.

"Part of our history has been working with cities and other private entities on brownfields since the 1980s, so this was a natural thing for us to apply for," Campa-Palaflox said.

Costs usually range from \$3,000 to \$5,000 for Phase I site assessments and up to \$10,000 for Phase II assessments, he said. The grant could be layered with other grants and state programs to provide tax rebates and attract companies willing to come in and create jobs.

In this economy, layering as many opportunities as possible is certainly key to achieving success with brownfields, agreed Ellen Vause, city manager of Hawthorne, who would like to see the downtown area that served old historic U.S. 301 revitalized.

In that town of 1,400 residents, the one-square-mile area running north to south along Highway 301 was bypassed when a four-lane roadway was created two blocks to the east.

All the properties that could be eligible for the grant are in this area, including four or five former gas stations, a 1940s car dealership and its vehicle parts and service buildings.

"The dealership building has a unique block and brick facade that could be rehabilitated and turned into a community center or theater that would make a nice addition to the downtown area," Vause said. "The area needs a spur for revitalization. It is within our CRA district, so it could be coupled with several grants to help the town and people bring new life to downtown."

While a few area properties were cleaned up years ago as part of the federal Superfund program, Vause believes the remaining ones have never been assessed.

The city-county coalition hopes to hear back from EPA by March on the status of their application.

Campa-Palaflox added that grants have been scaled back from a maximum amount of \$1 million to \$600,000 by the agency in an effort to provide more of them.



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

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- Regulatory policy and initiatives
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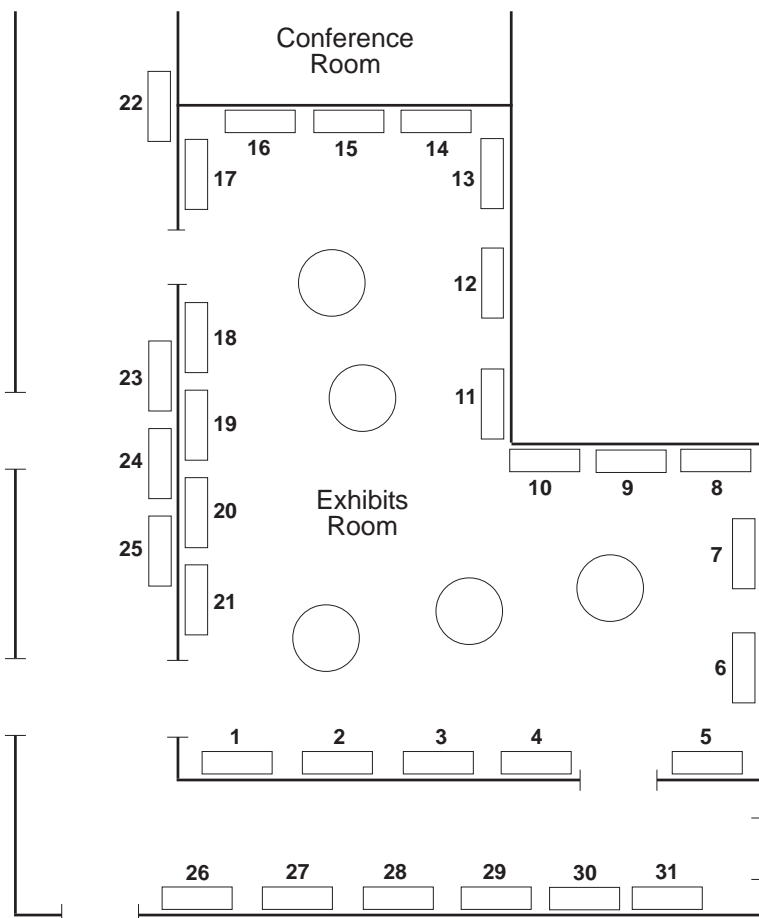
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High lead levels dog Vero Beach airport

By DAN MILLOTT

There is no disputing the fact that there is lead in the air and soils around the Vero Beach Municipal Airport from leaded aviation fuel used in piston-engine aircraft flying in and out of the facility.

Vero Beach Municipal Airport Aviation Director Eric Menger acknowledged that fact, but said that a safe unleaded fuel for smaller aircraft is still in the developmental stage.

Nationwide, small aircraft use enough leaded aviation fuel to account for half of the lead pollution in our skies, making it a significant air quality issue.

About half the planes that use the Vero Beach airport are piston-engine aircraft. The rest use jet fuel.

The presence of lead around the airport has raised concerns from a citizen's group, the Vero Beach Airport Advisory Committee.

The group's goal is to stop piston-engine aircraft from flying in and out of the airport. At a minimum, they want more testing for lead contamination at the airport.

The issue has been presented to the Vero Beach City Council, but so far the council has not moved to ban any aircraft from using the airport.

Howard Mielke, PhD, a Tulane University professor and expert on the effects of lead in the air, addressed the city council on the subject at a recent meeting.

Mielke said the amount of lead in the air created by aircraft at the Vero Beach airport amounts to 1,240 pounds per year. The tolerable intake for a human is six milligrams per day.

Children are particularly vulnerable to the effects of lead. Exposures to low levels of lead early in life have been linked to effects on IQ, learning, memory and behavior.

"It is an extraordinary problem...way beyond the tolerable level for children," Mielke said. "We have been using our children to test the environment and this is a terrible mistake. We are using them like canaries in a coal mine."

Menger noted that there have been tests for lead at the airport in the past but that they have had a problem with determining the source when lead contamination is found.

A 2011 test evaluated a sand sample and found the level of lead at five parts per million.

The U.S. Environmental Protection Agency guidelines at the time allowed 400 parts per million in sand used in playgrounds and other—a standard that Mielke said is not close to tough enough.

The EPA recognizes lead as a neurotoxin and in 2008 set tough new standards for acceptable levels in the air.

Mielke's study of lead goes back decades. He appeared before Congress when the decisions were made to remove lead from gasoline used in motor vehicles. That was in 1986.

At the time, it was agreed to keep lead in fuel for aviation use.

"There was concern that removing lead would create problems with carburetors in planes," he said. "We didn't want to see airplanes crashing because of that."

After lead was removed from fuel, there was a 90 percent reduction in blood-lead level in the exposure of children to lead, said Mielke.

Menger noted that removing lead from motor vehicle fuels decreased its concentrations by 91 percent between 1980 and 2002.

He said EPA is conducting surveys at various airports as it studies the impact of removing lead fuel from piston-engine aircraft.

He said the agency is still determining how much danger leaded aviation fuel presents.

Both Mielke and aviation officials agree that there is a need for an unleaded fuel that is safe for use in piston-driven aircraft. We're just not there yet.

Calendar

January

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

JAN. 7-11 – 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.treeco.ufl.edu.

JAN. 7-11 – Course: Wastewater Class A Certification Review, Lakeland, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 8-11 – Course: Wastewater Class B Certification Review, Lakeland, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 9 – Course: Surface Water Treatment, Orlando, FL. Presented by the Florida Section of the American Water Works Association. Visit www.fsawwa.org.

JAN. 9-10 – Course: Introduction to Building Energy Modeling, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 10-19 – Course: Backflow Prevention Assembly Tester Training and Certification, West Palm Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 10 – Course: Backflow Prevention Recertification Review, Kennedy Space Center, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 11 – Course: Backflow Prevention Recertification Exam, Kennedy Space Center, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 14-16 – Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 15-17 – Course: Train the Trainer: How to Design & Deliver Effective Training, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 15-18 – Course: Environmental Awareness Bootcamp, Orlando, FL. Presented by EPA Alliance. Call (713) 703-7016 or visit www.epaalliance.com.

JAN. 16-17 – Course: Underground and Above-ground Storage Tank Management, Orlando, FL. Presented by EPA Alliance. Call (713) 703-7016 or visit www.epaalliance.com.

JAN. 21 – Conference: Gulf of Mexico Oil Spill & Ecosystem Science Conference, New Orleans, LA. Contact Mike Carron, Gulf of Mexico Research Initiative at (228) 688-2687 or Michael.carron@gomri.org.

JAN. 22 – Course: Lead Refresher: Risk Assessor, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 24 – Seminar: Reuse Seminar, Altamonte Springs, FL. Presented by the Florida Water Environmental Association. Contact Lisa Prieto at (407) 366-9443 or visit www.fwea.org.

JAN. 24 – Course: Green Globes Professional (GGP) Certification Course, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 24 – Course: Backflow Prevention Recertification Review, Kennedy Space Center, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 25 – Course: Backflow Prevention Recertification Exam, Kennedy Space Center, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 25-26 – Conference: 22nd Annual Southwest Florida Water Resources Conference, Ft. Myers, FL. Contact Kristin Bennett at (727) 781-3414 or visit awra.caloosahatchee.org.

JAN. 28-30 – Course: Asbestos: Inspector, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 28- FEB. 1 – Course: Water Class A Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 29-FEB. 1 – Course: Water Class B Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 29 – Course: Unidirectional Flushing Workshop, Marianna, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 29-31 – Conference: 16th Annual LMOP Conference and Project Expo, Baltimore, MD. Presented by the U.S. Environmental Protection Agency's Landfill Methane Outreach Program. Call (781) 674-7374 or visit www.epa.gov/lmop.

JAN. 30 – Course: 4-Hour Refresher 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.treeco.ufl.edu.

JAN. 30 – 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.treeco.ufl.edu.

JAN. 30 – Course: Basic Water and Wastewater Pump Maintenance, Marianna, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 30-31 – Course: Initial Training Course for Transfer Station Operators and Material Recovery Facilities, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

JAN. 31 – Summit: 2013 Joint Summit, Beyond 40%, Florida's Pathway to Sustainability, Orlando, FL. Presented by the Florida Sunshine Chapter of the Solid Waste Association of North America and Recycle Florida Today. Call (727) 797-4234 or visit www.swanafl.org.

February

FEB. 1 – Course: Backflow Prevention Recertification Review, Fort Myers, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

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

FEB. 4 – Course: Lift Station Maintenance, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

FEB. 5 – Course: Asbestos Refresher: Operations & Maintenance (Class III), Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

FEB. 5-6 – Conference: Professional Engineer Legislative Days, Tallahassee, FL. Hosted by the Florida Engineering Society and the Florida Institute of Consulting Engineers. Call (850) 224-7121 or visit www.fleng.org.

FEB. 5-8 – Course: Water Distribution Systems Operator Level 2 & 3 Training, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

FEB. 6 – Course: Lead Refresher: Worker, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

FEB. 6 – Course: 4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations, Sebring, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

FEB. 6 – Course: Spotter Training for Solid Waste Facilities, Sebring, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

FEB. 7 – Course: Asbestos Refresher: Worker,

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

FEB. 7 – Course: Health and Safety for Solid Waste Workers-Part 1, Sebring, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

FEB. 7 – Course: Health and Safety for Solid Waste Workers-Part 3, Sebring, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

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

FEB. 7 – Course: Backflow Prevention Recertification Review, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

FEB. 7-8 – Workshop: The Complete Environmental Regulations Workshop, Orlando, FL. Presented by Lion Technology. Call (973) 383-0800 or visit www.lion.com.

FEB. 8 – Course: Backflow Prevention Recertification Exam, Destin, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

FEB. 8 – Course: Backflow Prevention Recertification Review, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeco.ufl.edu.

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

Carbon injection technology shows solid potential to remediate state petroleum sites

By MELORA GRATIAN

Using activated carbon to remove contaminants from the air and liquids is nothing new. However, turning the process around and injecting an activated carbon-based slurry into the ground for remediation purposes is not exactly commonplace.

A demonstration of the in-situ process applied to cleaning up contamination from leaking underground storage tanks is underway at a pilot project at a petroleum-

impacted site in South Carolina.

The former gas station was treated for four days this past August with the CleanInject™ system. The effort produced an 86 percent reduction in contamination concentrations three months later, said Brian E. Chew Sr., PG, principal hydrogeologist with North Carolina-based Enviro-Equipment Inc.

The test involved injecting the area near the tanks and fuel islands as well as down

gradient where contaminants had migrated.

"We had leftover carbon and treated the area where it migrated and added 20 more injection spots. It knocked almost all of it out," said Chew, whose company is mass producing the patent-pending remediation systems for Resource Geoscience. Colorado-based Resource Geoscience is run by Thomas B. Lewis, the company president and lead inventor of the CleanInject system.

In a July 2012 paper analyzing the use of activated carbon to clean up petroleum contamination, Lewis said his firm starting using the process on tank sites in 2006. "As our own understanding of the steps to properly design and inject carbon-based injectate evolved, we began seeing unparalleled results in sites remediated with CBI. In fact, the success rates were so great that we began questioning how rates like these were even possible," he wrote.

Lewis went on to say that he conducted a survey and found that only the five states of Colorado, Wyoming, Kentucky, Oregon and Utah said they use the technology. He attributes this partly to injectates having developed a bad reputation from previous failures and regulators not wanting to depart from conventional methods.

Chew believes that Florida has ideal sites for remediation with CBI due to its surplus of contaminated sites along the coast.

Sites on the coastal plains are ideal, he said, because the contaminants are shallow and it is easier to penetrate coastal sediments with a geoprobe than denser materials such as bedrock and clay or silt stone.

The best thing about the technology, said Chew, is its simplicity. It combines the known use of carbon with the trend toward using in-situ technologies.

"It uses a common material that is not dangerous. The bacteria will grow on it and

regenerate it," he said. "Plus, the carbon can be left in place or landfilled because the chemicals won't leach out of it. It is a basic, easy process. It's surprising that it hasn't been done a lot before."

Chew said the CleanInject system utilizes a double diaphragm pump that fracs the carbon into the ground at up to 1400 psi versus 100 to 300 for similar pumps.

The system mixes the carbon and water in the correct proportions then pumps it into a mixing tank that keeps the dust and typical mess from the carbon to a minimum.

The mix, which varies with the type of material and concentrations of contaminants in the ground, is a fine grade containing no additives.

Chew said he expects the SC site to cost between half and three-fourths of the \$100,000 bid and be completed in half the time.

The site will be re-sampled in early 2013 to see if more injections are needed.

If the contaminant amounts are below site specific target levels, the job will be finished except for a final round of sampling to confirm diminished contaminant levels. If the contaminants are above site-specific target levels, more injections may be needed.

Other conventional technologies, such as sparge and vent, could take around two years to produce a similar result and cost three to five times more, Chew estimated.

"There are hundreds of thousands of these sites out there and new ones popping up every day," he said.

Other possible uses for the technology include marine sediment remediation, well-head protection and sensitive receptor protection.

Moreover, the carbon material could be injected beforehand in excavation areas known to contain petroleum contamination as a way to protect workers and minimize transference during excavation work.

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TBW appeals latest ruling in reservoir case

By PRAKASH GANDHI

Officials with Tampa Bay Water are fighting a judge's ruling that they must pay attorney's fees and costs in a lawsuit with HDR Engineering Inc. over the design of the C.W. Bill Young Reservoir.

The federal judge overseeing the case ruled that HDR deserves \$9.2 million in attorney's fees and \$10.8 million in expenses for defending itself against the utility's unsuccessful lawsuit. The utility's board has voted to appeal the ruling.

TBW sued all the companies involved in the construction of the 15.5-billion-gallon reservoir in rural Hillsborough County after cracks developed in the interior and

soil-cement lining.

TBW initially demanded \$225 million from reservoir designer HDR. But by the time the case reached the jury, the utility was seeking only \$73 million.

Before the case went to trial, the utility rejected a settlement of \$30 million. Utility officials said the amount was too low and would put too much of a burden on ratepayers for fixing the cracks.

TBW reached a \$6 million agreement with construction manager CDG in October 2010 and a \$750,000 settlement with contractor Barnard Construction in October 2011

RESERVOIR

Continued on Page 15



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Monroe County officials begin major canal cleanup in Florida Keys

By DAN MILLOTT

It will take millions of dollars and lots of time, but the initial phases of a program to cleanup canals in the Florida Keys has begun.

After years of development and human activity, 503 canals from Key West to Key Largo now suffer from varying degrees of pollution and require restoration.

Rhonda Haag, sustainability manager for Monroe County, said the county—now armed with a \$100,000 grant from the Florida Department of Environmental Protection and a second \$100,000 grant from the U.S. Environmental Protection Agency—has put the cleanup program in motion.

New biodiesel plant recycling waste cooking oil in SW Florida

By ROY LAUGHLIN

Florida Biofuels LLC planned to shift into full production in late December, producing biodiesel from Southwest Florida's used cooking oil. The company uses a turnkey system purchased from Sweden's Ageratec, said Mindy Collier, quality control manager at the Fort Myers plant.

Turning waste cooking oil, predominantly vegetable oil, into biodiesel is not necessarily a straightforward process. Each shipment of waste oil has its own characteristics based on its primary components, water content and solids composition, said Collier. A used soy oil is treated differently from one consisting predominantly of other vegetable oils.

Florida Biofuels has created a set of recipes that are mixed and matched to make biodiesel from significantly varying feedstock. These procedures include some supplied by Alfa Laval, who purchased Ageratec this summer, and some that Florida Biofuels staff has developed.

In addition to biodiesel fuel oil, their process produces glycerin and filtered solids, both of which have commercial value. "Every bit of it can be reused," said Collier. About 90 percent of the used oil ends up as biodiesel or is recovered for other uses.

"We're striving for a high quality product," she said. "We're doing a lot of internal

AWARDS From Page 5

For the second year in a row, the winner for the large community water treatment plant in the Northwest District is the Bay County Water Treatment Plant.

DEP officials said staff with Bay County Utilities has implemented an outstanding preventive maintenance program, completed a thorough process review, and instituted a strategic plan of corrective action.

The winner of the medium community water treatment plant in the Northwest District is Destin Water Users Inc.

Destin's innovative programs include a reclaimed water aquifer storage and recovery system to help reduce irrigation demands on the drinking water aquifer.

The winner of the small community water treatment plant award in the Northwest District was Naval Air Station, Whiting Field in Milton. DEP officials said NAS Whiting Field's drinking water personnel keep the system at optimal operation because of their pro-active approach.

The winner of the non-community water treatment plant award in the Northwest District is Eglin Air Force Base, Duke Field.

DEP officials said the Duke Field personnel do an excellent job of running and maintaining their water system. Since 2008, Duke Field has not had a single deficiency in its inspection or sanitary survey reports.

The winner of the large community water treatment plant in the South District is Collier County's North County Regional Water Treatment Plant.

The plant is a large community system

In Phase One, the county filtered through volumes of information on canal conditions along the 100-mile-plus chain of islands, prioritizing the canal work. They plan to tackle the worst sites first.

In September, the Monroe County Commission approved a contract with AMEC to begin Phase Two. The second grant will fund their work.

The two grants for the canal cleanup project represent only a small portion of the money that will eventually be needed for the cleanup. Haag said that it will ultimately require millions of dollars.

She said that additional DEP and EPA grants would likely be the main source of funding but property owners residing along canals may be asked to help financially.

lab testing, just making sure we meet and exceed the requirements for ASTM biodiesel. Some people don't understand how difficult it is (to meet those standards)."

Collier said that biodiesel is just as stable as diesel fuel from any other source once you get the water out. Its shelf life is approximately six months. She also said that biodiesel will clean the fuel system of a vehicle that has not used biodiesel previously. Diesel fuel from cooking oil can be handled and used the same way as diesel from petroleum.

Collier said that Florida Biofuels currently buys used cooking oil from a broker. The oil is collected primarily from restaurants and other bulk food preparation facilities. In addition to the broker from whom she currently buys, several other brokers have offered used oil.

She said that some communities have domestic cooking oil collection and recycling efforts capable of contributing to regional scale biodiesel production. She does not expect a shortage of used cooking oil in southern Florida, even seasonally.

The effort to get the plant permitted, constructed and in operational status has taken about four years and nearly \$10 million, most of it from Florida Biofuel's three co-owners: Roy Benton II, his son Roy Benton III, and Dave Lageschulte.

BIODIESEL Continued on Page 16

serving 142,000 customers and was recently recognized by the American Water Works Association as being in the top five nationally for the 2012 America's Best Tasting Water award.

The winner for the medium community water treatment plant award in the South District is the Charlotte County Utilities' Burnt Store Water Treatment Plant. DEP said system maintenance is state-of-the-art and there are fast reaction times for unexpected occurrences.

The winner for the large community water treatment plant in the Southeast District was the Tropical Farms Water Treatment Plant in Stuart. DEP praised the plant for its sophisticated efforts to produce high quality water.

The winner for the medium community water treatment plant is South Martin Regional Utilities, North Water Treatment Facility.

South Martin regional utilities implemented a four-step approach to meet the goals of its community: a pro-active wellfield protection and maintenance program; a program to replace, rebuild and automate every piece of water plant equipment; a strong customer service policy; and a commitment to be a great corporate citizen to all of Hobe Sound.

The award in the large community water treatment plant category went to the Tampa Bay Regional Surface Water Treatment Plant.

The plant was the largest design-build-operate drinking water project in U.S. history, representing a model for other cities facing growing populations, tight budgets and water resource challenges.

During the September Monroe County Commission meeting, Commissioner Danny Kolhage suggested that people who caused the condition of the canals should help pay for their cleanup.

But newly elected Monroe County Mayor George Neugent said most of the people who caused the problem are probably dead and gone by now.

Haag said the plan is to start with several demonstration projects in selected canals

"There are several different methods for restoring canals, (including) removing muck from the bottom of the canal, employing an air bubbler system or using a weed gate method."

The Phase Two contract runs until Sept. 30, 2013. County staff began meeting with AMEC in mid-December. Haag said that over the next few months they will nail down their ranking system for the canals.

Once that canal list is pared down, one canal will be selected as a demonstration project for each of three methods of cleanup.

"We will approach homeowners on the selected canals to see if we can get a cost match from them," said Haag. "That would give the grant more bang for the buck and would provide for more restoration work than could be achieved by the grant alone."

Haag indicated the September deadline is only a timeline for completion of the master plan for the canal cleanup program.

"We can look for canal cleanup projects before that if we see grant opportunities," she said.

At this point, Monroe County has not made a decision on how much funding they will provide. Haag pointed out that canal cleanup will ultimately improve the water throughout the Keys so it is something that county leaders will have to consider.

The ranking of the canals will determine where the cleanup will begin. "Canals in the worst condition will go to the top of the list for restoration, then we'll work our way down," Haag said. "Cost matches and other factors, including grants, will determine which projects get funded first."

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ADENA
From Page 1

capacity of the hypothetical surficial aquifer well of 0.44 percent, and a maximum predicted impact to pumping capacity of the hypothetical Upper Floridan Aquifer well of 0.81 percent.

"This conservative, maximum predicted impact to pumping capacity will result in negligible impact to legal uses of water in existence at the time Adena's application was submitted, and is well below the 10 percent or greater threshold," according to the permit application submitted by Andreyev Engineering Inc.

One of the main concerns from opponents of the permit is the impact of additional groundwater pumping to the flow levels in the region's watershed, especially Silver Springs, which some experts say is already at critically low levels.

"The flow in Silver Springs is down over 30 percent over the last decade and 50 percent in the last two years compared to previous levels," said Robert L. Knight, PhD, director of the Howard T. Odum

Florida Springs Institute in Gainesville. "The 5.3 mgd probably won't be every day, but the flows are already down beyond a tolerable level."

The SJRWMD recently announced a Springs Protection Initiative to help boost protection of these resources with tools such as minimum flows and levels and projects to reduce nutrient loading.

With respect to Silver Springs, the district attributed its low flows to rainfall shortages, submerged vegetation slowing flow into the Silver River and factors such as attached algae growth. It also said the spring needed significant reductions in nitrate loading.

"There is science and there is opinion. What the district is doing (with the springs initiative) is based on science," Rand said. "If the predictions are wrong, the district has the authority to make changes."

The Adena permit application attributed the spring's reduced flows to increased amounts of submerged vegetation, as well as the rerouting of the spring vent system, which changed hydraulic conductivity.

It concluded that the proposed with-

drawal would have a "de minimis impact on Silver Springs discharge," and an "im- measurable effect" on the level and plant life in Silver River.

Knight disagrees with these permit numbers and predictions.

"I told the district that I disagree that the reductions are due to natural causes such as rainfall and vegetation," he said. "It is clearly due to pumping and activity outside the watershed beyond levels that rainfall can restore."

"We have analyzed it given rainfall amounts and—correcting it for that—are still getting significant reductions in flows," he said. "I think the district needs to admit they are over-pumping to begin with."

There is a drawdown issue from pumping in the entire northern region, Knight said, citing geologic data for the state that the Jacksonville area is 60 feet down and Orlando is between 30 and 40 feet down.

Knight also said that some of the nitrogen from the cattle operation will make its way into the groundwater regardless of the best nutrient management plans and practices, creating additional harm that will exacerbate existing nutrient issues and problems with flow.

"There needs to be a great reduction of nutrients in the springshed," he said. "The nutrients and flows are synergistic and explain a lot of problems in the springshed."

The grazing system is designed for 17,250 finishing cattle with about 8,400 grazed under the 34-center-pivot irrigation systems. The pivots are irrigated and rotationally grazed to maximize cattle weight gain.

About 8,400 additional finishing cattle will be grazed on about 7,550 acres of un-irrigated pasture and 850 acres of wooded pastures that provide heat relief.

All pastures will maintain a balance between the manure nutrients and the plants' nutrient uptake capacity. Application rates of manure are based on those uptake levels and will be below amounts established as impairing groundwater or surface resources, according to the Nutrient Management Plan summary.

The plan was prepared by Del Bottcher, PhD, PE, with Soil and Water Engineering Technology Inc. in Gainesville and Royal Consulting Services Inc. in Longwood.

NOTES

From Page 3

governments and nonprofits that can improve protection of human health and the environment, add to the tax base, and create jobs and housing opportunities.

Dredging settlement. Hernando County commissioners voted for a partial settlement with Orion Dredging Services LLC, the original contractor that worked on the Hernando Beach channel dredging project.

Orion sued the county after commissioners removed them from the project for not adhering to the contract.

The county has agreed to pay the company \$1.7 million. All parties will then dismiss and release their claims against each other.

Fine levied in chemical spill. A Fort Myers chemical company has paid \$28,800 in federal fines tied to a spill of hundreds of gallons of sulfuric acid on State Road 60 in April.

U.S. Department of Transportation investigators concluded that Davis Supply failed to properly train the truck driver in-

Some of the general practices planned for waste storage, collection and transfer facilities include limiting confined livestock areas to reduce the accumulation of waste. The only CLAs requiring a waste management system will be the cattle unloading/corral facilities and a staging corral that is close to the processing plant. These facilities include features such as berms and retention ponds, and the management of some biosolids.

The amount of nitrogen and phosphorus making its way to surface and groundwater resources is minimized with practices such as utilizing a diet with the lowest possible phosphorus content, said the plan. This NMP is part of the Conservation Plan and used with elements such as crop rotation, residue management, pest management and conservation buffer practices.

The amended application also examined possible alternatives to using groundwater that were raised after the initial application. Most of these alternatives were deemed not feasible for either economic or environmental reasons.

For instance, the possibility of using reclaimed water from Ocala would cost an estimated \$26.2 million versus \$1.7 million for the construction of a 14-mile re-use main, a storage pond, pump station, distribution line and backup wells.

The application also discarded infrastructure to withdraw water from the Ocklawaha River due to a price tag of \$43.3 million and the disposal of wastewater from a treatment facility and impact to wetlands.

A plan to combine withdrawing water from the river and the Upper Floridan Aquifer was also rejected.

Knight expects the district to approve the permit, but he said staff should at least establish a safety yield for aquifer withdrawals to establish what can be removed before triggering the MFLs so that water can't keep being pulled from the springs.

"The public has spoken loud and clear—with thousands of comments—that it isn't in their best interest," Knight said. "It is time the district learned to say no. Groundwater is not essential for farming. We are going to be buying back this water from the farmers and the taxpayers will be faced with the bill."

involved in the spill and secure the acid tanks on the vehicle.

The company was responsible for three spills in Polk County in 2012 involving sulfuric acid.

Names in the news. Eric Brown joined Tetra Tech Inc. in Tampa as senior program manager. He has more than 30 years of experience in the environmental, consulting and remediation services industry.

Brown will be responsible for overseeing major power, utility and energy client services, as well as industrial client services implementing environmental programs for energy waste, power facility operations, environmental engineering, and construction and remediation services throughout North America.

Conservation award. Avon Park Air Force Range has earned a share of a conservation partnership award for an initiative to help restore the Florida Everglades.

The Everglades Conservation Area worked to establish a 150,000-acre refuge to protect key grassland and savanna landscapes and working ranches in Central Florida.

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Sarasota County officials focus attention, dollars on Dona Bay cleanup

By DAN MILLOTT

Sarasota County officials and their consultants are gearing up to find ways to restore Dona Bay near Nokomis. Besides achieving cleanup of the bay, officials are seeking ways to store the diverted fresh water for future use.

The fresh water now making its way

FEDFILES From Page 2

mary and secondary uses, attempts to adjust energy estimates with respect to power plant efficiency, and accounts for the "embedded energy" of machines and functions associated with water preparation, use and disposal.

By the numbers, 611 billion kilowatt hours of electricity were associated with water consumption in the U.S. in 2010. This equals the average electricity consumption of about 40 million Americans.

This energy allocation promotes U.S. water use of slightly more than 400 billion gallons per day. About 350 million gallons of total U.S. consumption is freshwater.

The water in this total includes that used to cool power plants, irrigate crops, manufacture goods and supply public drinking water systems.

The report noted that "water-stressed" states inevitably shift towards more energy intensive water supplies to meet shortfalls. Florida, California, Texas and Arizona fall in that category.

Desalination plants and long-distance, inter-basin pumping are two energy intensive processes frequently used to increase water supply.

Coal plants impact communities of color. Coal-fired power plants disproportionately burden poor and minority communities with high levels of air pollutants. Exposure to mercury, lead, sulfur dioxide, nitrogen dioxide and particulates negatively affects public health in the affected communities, according to a report, "Coal Blooded: Putting Profits Before People," recently released by the National Association for the Advancement of Colored People and its partners.

This report frames the issue by noting that six million people living within three miles of coal-fired power plants have an annual per capita income of \$18,400. Thirty nine percent of the residents are people of color.

The report noted that emission characteristics across the 378 coal-burning plants vary significantly. Seventy-five plants were fingered as the worst—"failing" plants. Socioeconomic status within three miles of those 75 plants was below the average for all plants.

Within the three-mile radius of the worst emitters, the average per capita income is \$17,500, and 53 percent of the residents are minorities.

The Midwest has the most failing plants, but the South has its share. Virginia topped the list with five and North Carolina had four. Florida had three failing grade coal-fired plants.

The report noted that in March, the Obama administration proposed strict new carbon emission standards for coal-powered plants. Many of the power plants identified in this report may be closed if they cannot be upgraded. Some already have been closed or are slated for closure.

The report was sponsored by the NAACP, Little Village Environmental Justice Organization and the Indigenous Environmental Network.

EPA suspends BP from new federal contracts. On Nov. 28, the EPA barred BP Exploration and Production Inc., BP PLC and named affiliated BP companies from new contracts with the U.S. government.

EPA took the action following BP's Nov. 15 plea agreement. BP will plead guilty to 11 counts of misconduct or neglect of ships officers, one count of obstruction of congress, one misdemeanor count of violation of the Clean Water Act and one misdemeanor count of violation of the Mi-

into Dona Bay comes from nearby Cow Pen Slough. Over the last few decades, water flowing into the wetlands had been diverted by agricultural interests into Dona Bay. The result has been excessive nutrient loading to the fragile Dona Bay ecosystem.

In November, the county signed an amended \$600,000 design contract with consulting firm Kimley-Horn. Sarasota

gratory Bird Treaty Act, all arising from the Deepwater Horizon disaster.

The agency acted under its authority as the designated lead agency for suspension and disbarment actions following the explosion on the rig and ensuing oil spill.

The purpose of this decision is to ensure the integrity of federal programs by conducting business only with responsible individuals or companies.

Suspensions are a standard practice when a responsibility question is raised by action in a criminal case, according to an EPA press release.

Suspension of BP's participation in "contracts, grants or other covered transactions" will remain in effect until BP and its named affiliates provide evidence to the EPA that it can meet federal business standards.

County Project Scientist Mike Jones said the immediate goal of the work is to divert water from the slough to storage areas, and to reconstruct and improve an existing weir to keep fresh water out of Dona Bay.

"There are two weirs now, one down stream before it enters Dona Bay and another adjacent to county property. We're going to look at reconstructing that one," Jones said. "We are also looking at several options for taking water from Cow Pen Slough and trying to maximize ways to treat that water."

RESERVOIR From Page 12

In April, a federal jury ruled that HDR did not breach its standard of care in designing the reservoir.

TBW officials said they have already filed a motion asking the presiding judge for a new trial due to legal errors in the first trial. The errors, say utility managers, include the exclusion of key evidence and witnesses, and the admission of improper testimony.

Richard Harrison, trial counsel for the utility, said they will include the appeal of attorney's fees and costs in that proceed-

Over the years, the county and the Southwest Florida Water Management District have spent \$8.5 million for land acquisition and on outside consultants. Kimley-Horn alone has been paid \$1.7 million including the \$600,000 just approved.

The new design work should be completed by the end of 2013.

The estimated cost of construction of the conveyance system is about \$6 million with construction expected to be complete sometime in 2015.

ing. "If the original verdict is reversed, then naturally we believe Tampa Bay Water doesn't owe HDR any fees," Harrison said.

"We were surprised the judge did not make a greater adjustment to the amount he awarded," he said. "HDR had more than 100 people working on the case. That number is frankly ridiculous."

Officials with HDR did not return calls for comment in December.

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SHAKE-UP

From Page 1

to economic recovery.

State environmental officials said the changes in the division will have major benefits. "The restructuring combines similar functions working together, thereby resulting in operational efficiencies, improved communications, better training, as well as reducing the number of managers

and making work flow faster," said DEP deputy press secretary Dee Ann Miller.

Miller said that starting in July, the Division of Water Resource Management began its formal efforts to redefine its leadership team structure.

The division also started an assessment to identify processes and efficiencies that will benefit the environment, the agency and the division.

"This is in keeping with the overall agency priority of a regulatory process that is interpreted consistently across the state," Miller said.

The assessments and evaluations are being conducted throughout all divisions, districts and programs within the department. Miller said they are a critical component of improving the effectiveness of "the way we do business."

A necessary component of the assessment was looking at staffing levels and making sure that the department is being as fiscally responsible as it can, she added. DEP officials are making sure that staffing levels are consistent with the current workload and department priorities.

The division has completed its assessment and has finalized its new organizational structure. It will go from five bureaus to 16 programs, elevating more programs to the division level.

In the new organization, structure levels of management went from seven to four and the employee to supervisor ratio increased from 3.1 to 7.1.

Miller said that all of the statutory obligations remain fulfilled under the new program structure and are, in fact, more visible.

She said that some programs will be elevated to the division level and programs such as beaches will receive more visibility and be less hindered by bureaucracy.

BIODIESEL

From Page 13

At full capacity, the plant could produce up to 12,000 gallons of diesel per day, or 4.5 million gallons per year. Much of the biodiesel is likely to be blended with petroleum-derived diesel. The plant's owners do not foresee any difficulty selling their biodiesel because there is an established market for biodiesel.

The U.S.' liquid fuel use is so great, 12,000 gallons per day may seem insignificant, but the opposite is true. A mosaic of reliable sources makes an economically resilient supply chain. Recycling used cooking oil contributes additionally to resource management.

ERP

From Page 1

"I see this as the state's attempt to reign in all the changes (within each water management district) and bring in the best from each one," he said.

Mullin has closely followed the rule's development and said that the draft rule may be near its final form.

"I don't know how much benefit the regulated community will have" from the new rule, he said. Requirements for large entities have not changed across the board.

He noted that the changes are more likely to benefit small property owners, small businesses and local governments. In many cases under the new rule, these groups will not need to hire consultants and engineers to prepare permit applications.

Mullin said that at least nine more discrete steps remain before the DEP can finalize the proposed rule.

Miller noted that each water management district has its own rulemaking activities that will follow DEP's. This may extend any changes in permitting even further than the sixth additional months that DEP may need to finish its lead activities.

It may be well into next summer before the rule becomes effective. Additional significant revisions are certainly possible.

It appears, however, that the devolution of authority from Tallahassee to the water management districts for ERP decisions that began 20 years will be substantially reversed.

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