

Florida Specifier



Practical Information For Environmental Professionals

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The Fort Pierce City Council approved the designation of eight acres in the center of town as a brown-field site.

Rose Bay restoration 8

The SJRWMD, the city of Port Orange and Volusia County developed an aggressive five-point restoration strategy for Volusia's Rose Bay and established partnerships with the Florida Department of Transportation and the U.S. Army Corps of Engineers to help "git 'er done."

Fair share for Glades work? 9

A new Everglades Foundation study revealed that agricultural producers are responsible for 76 percent of the phosphorous flowing into the Glades, but pay just 24 percent of the cleanup cost.

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Florida Atlantic University's recent designation as one of three National Marine Renewable Energy Centers places Florida squarely in the forefront of ocean energy development.

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Big money is needed for the repair and replacement of aging pipes and other drinking water infrastructure, according to a new report by the American Water Works Association. The report paints a grim picture of the enormous costs associated with making improvements to water distribution systems in the next 25 years.

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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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Building artificial reefs: More than sinking ships

By ROY LAUGHLIN

In the public mind (and perhaps also those of environmental professionals), no clear distinction may exist between ship wrecks, sub-sea disposal of ships and artificial reef programs.

A ship's route to the bottom is substantially different for each of these three fates.

For a shipwreck, it is accidental. This article concerns the other two, which includes purposeful placement and economic benefits for two completely different reasons.

Florida leads the nation in artificial reef construction using metal ships. Nearly every coastal county has an artificial reef site and some have several. The economic benefits from increased fishing and diving, especially by tourists, can be substantial.

Minimizing environmental impacts and reef placement criteria are the biggest concerns with artificial reef construction.

Without proper preparation, ships may release substantial amounts of undesirable and sometimes toxic contaminants to the marine environment.



Photo by Keith Mille, Florida Fish and Wildlife Conservation Commission

Kerry Maxwell, a marine biologist with the Florida Fish and Wildlife Conservation Commission's Keys Marine Lab, records post-deployment measurements of the Vandenberg artificial reef off Key West. See story at left.

Florida is at the forefront of practice to ensure that its ship-based artificial reef program contributes minimal contaminants to the environment.

In 2006, the U.S. Navy placed the USS Oriskany off Pensacola. That led to a short term spike of polychlorinated biphenyls bioaccumulation in fish around the wreck that lasted several

years. PCBs have been the most significant contaminant with demonstrated hazard to date.

Keith Mille, environmental specialist III with the Florida Fish and Wildlife Conservation Commission,

REEFS
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Unprecedented level of change at WMDs clouds future of state water policy

By MELORA GRATTAN

The departure of Doug Barr from the Northwest Florida Water Management District last month capped off major changes underway at the state's water management districts since Gov. Rick Scott took office.

Barr is the final executive director of the five regional districts to submit his resignation.

In addition to losing all of its top

officials, nearly 600 positions and \$750 million were cut collectively from the districts last year.

Whether these changes are viewed as beneficial or detrimental by special interest groups or individuals, they are certainly not viewed as business as usual for Florida.

"The extent to which Gov. Scott is 'cleaning house' is somewhat unprecedented, especially regarding the districts," said Jimmy Orth, executive director of St. Johns Riverkeeper.

"There was probably some 'fat' to cut from the budgets and people who probably needed to go, but we believe the cuts and turnover have been too severe," he said. "We have lost a lot of institutional knowledge and valuable expertise in the process."

The changes seem to be an effort by the governor to assert tighter control over the districts and our water resources from Tallahassee.

"We have certainly had our problems with the St. Johns River WMD over the years and some oversight is necessary," said Orth. "But we do support a watershed approach to the management of water with regional control."

But Wayne Flowers, a shareholder in the Jacksonville law office of Lewis, Longman and Walker PA, thinks it's simply a matter of a new governor trying to exert as much control as he can to accomplish his objectives and to move toward more uniformity in how the districts operate administratively.

"It doesn't mean that it (change) is bad or wrong," Flowers said. "It seems that this is a somewhat logical endpoint to this drive toward more uniformity and more control."

Flowers said the changes would have more impact on shaping what the districts' governing boards do than with the control that the state Department of Environmental Protection exercises over the water management districts.

However, some think that the changes are about more than control and will do damage to the whole con-

Cleanup progress slow, steady at Largo nature preserve

By PRAKASH GANDHI

City officials in Largo are working hard to clean up contamination at a nature preserve that has been dogged with environmental issues for years.

Largo Central Park Nature Preserve is a 31-acre nature park virtually surrounded by water. The preserve is home to hundreds of wildlife species.

But high levels of arsenic in certain areas, mostly around the observation tower, have kept the gates locked and the public out for almost three years. The Florida Department of Environmental Protection has been closely monitoring the situation.

The DEP approved the city's plan to remove soil around the preserve's observation tower. Soil tests near the tower have found levels of arsenic more than 11 times higher than the state's recommended level.

The city plans to remove and replace the top six inches of soil around the tower. Officials hope to clear the contaminated soil out before summer rains turn the area into wetlands.

Two years ago, the city completed soil sampling and initial groundwater testing, and finished a site assessment report in April of 2011.

Now, DEP wants Largo to conduct additional tests on non-city properties around the preserve for both arsenic and benzo(a)pyrene, a chemical substance found in automobile exhaust, tar and asphalt.

Both substances have been found in the soil at the preserve. Parts of the park and surrounding lands were used as a landfill from the 1960s through the early 1980s.

In 2008, DEP told city officials

LARGO
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DISTRICTS
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Feds name two Florida sites to Superfund National Priorities List

Staff report

The U.S. Environmental Protection Agency added the Continental Cleaners site in Miami to the Superfund's National Priorities List.

Between 1996 and 2005, Continental Cleaners released dry-cleaning fluids, primarily trichloroethylene, to a drainfield behind its facility. TCE and some of its degradation products have been found in soil and groundwater at the site.

The primary concern is that the contaminant plume may reach drinking water wells within several miles of the site.

Remediation efforts have not yet started.

In related news, the EPA nominated Fairfax Street Wood Treaters in Jacksonville to the NPL. From 1980 until 2010, wood was treated at the site with chromated copper arsenate, a pesticide.

In 2010, Wood Treaters LLC declared bankruptcy, leaving behind a site with decaying, leaking storage tanks and substantial soil contamination.

That contamination is spreading via groundwater and wind dispersal to adjacent residential properties, nearby schools and a day care center.

The EPA has already removed surface soils, storage and plumbing systems, and water and sediments from an on-site retention pond. Water and sediment from an adjacent retention pond servicing an elementary school have also been removed.

These two Florida sites were among those placed on the NPL nationwide, or nominated for placement to the NPL.

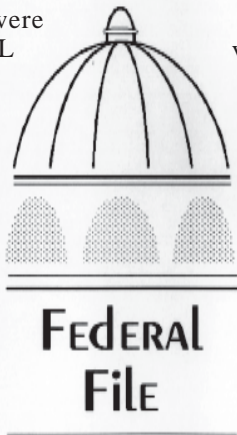
In its announcement, the agency said it placed the sites on federal lists because parties responsible for the contamination could not provide funding for cleanup, and state and local funding was unavailable.

EPA rulings subject to judicial review. In a decision that supports Fifth Amendment rights to due process, the Supreme Court ruled unanimously that EPA rulings are subject to judicial review when issued.

In simple terms, it gives individuals and businesses the right to ask a court to decide on the legality of an EPA ruling as

soon as the ruling is issued, without waiting for the agency to exact fines or other punitive measures.

In this context, "ruling" has a specific meaning pertaining to an EPA action intended to enforce one of its rules under law.



The case before the court involved the actions of residential property owners in Idaho. They purchased a small lot, which they filled with dirt and gravel in preparation for construction. Subsequently, the EPA characterized their lot as a wetland under the protection of the Clean Water Act and ordered the property owners to remove the fill and restore the site to its original condition.

Absent compliance, the property owners could be subject to fines up to \$75,000 a day. However, the EPA did not assess fines.

The couple sued the EPA. The court sided with the agency whose argument was that a compliance order, part of a deliberative process, did not entitle the property owners to sue.

The agency said that only when the EPA issued a final decision was the couple entitled under law to sue. The recent Supreme Court decision reversed a lower court's judgment.

In its decision, the Supreme Court supported only the couple's right to sue under the Administrative Procedure Act, at an early stage in the administrative process. That ensures that procedural delays would not deprive the property owners of legal use of their property.

The Supreme Court did not decide whether the property owners were justified in suing the EPA, or deny the EPA's ruling under the Clean Water Act. That will be decided in a lower court should the property owners decide to again go to court to contest the EPA's original ruling.

Solar power industry report. In 2011, solar panels capable of generating 1.855 megawatts of photovoltaic electricity were installed in the U.S. This is more than double the 887 MW potential capacity installed in 2010.

The total value of the installation projects was \$8.4 billion.

Photovoltaic panel installation schedules in the final quarter of 2011 suggest that 2012 is likely to be another banner year. Predictions for 2012 are that 2500-2800 MW of photovoltaic panels may be

installed, reflecting completion of backlogged projects.

According to the report released by GTM Research and the Solar Energy Industries Association, the rosy picture for installations is tempered by noting that profits for solar energy panel fabricators and suppliers have eroded significantly due to a glut of supplies on the global market.

Many sources blame China for dumping solar panels below costs. By the third quarter of 2011, costs dropped to \$3.20 per watt for photovoltaic electricity. These prices are expected to carry into 2012.

The 2011 figures give the U.S. a number four ranking in the global solar power panel marketplace. But the U.S. accounts for only 7 percent of the global solar power market, in spite of its fourth-place standing. Germany, Italy, and China all ranked higher ahead of the U.S. for installation of photovoltaic power sources.

NNC compliance costs underestimated. A committee of the National Research Council reports that the EPA underestimated the costs of Florida's compliance with the court-ordered numerical nutrient water quality criteria for phosphorus and nitrogen.

In its report, the NRC committee noted that the agency based its estimate only on the number of "impaired sites" that would immediately require some remediation effort.

The committee noted that the EPA underestimated both the number of newly impaired waters and the mitigation costs for stormwater, agricultural, septic system and government sectors.

In addition, there was uncertainty regarding the estimates for the municipal and industrial wastewater sectors, making it difficult to know whether the agency underestimated or overestimated those costs.

The committee noted that the EPA was correct in its approach for calculating the cost of the rule change. In spite of the limitations the committee discussed in its report, it also noted that the immediate costs of the new rule with its change from narrative to numeric standards would be small in comparison to the total funding required to restore all of Florida's waters.

Members of the NRC committee said the discrepancies among the different cost estimates promoted by different groups could be traced to differing assumptions.

The purpose of the NRC report was to evaluate current cost estimates and their derivation. The committee did not assess

FEDFILES
Continued on Page 14

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Proposed Lee County biorefinery hits development snag

Staff report

Algenol Biofuels Inc. wants to make ethanol from algae at a commercial farm in Lee County—the first of its kind in Florida.

But the company's plans recently hit a road block.

Under state legislation recently passed, the Fort Myers-based company must obtain a special permit before it can grow algae on a farm bigger than two acres unless the Florida Department of Agriculture and Consumer Services gives it an exception.

State officials are concerned the algae could hurt the environment if it escapes from such a facility.

The algae are grown in seawater with the help of sunlight and added nutrients.

Company officials are working to address the state's concerns.

By 2025, Algenol hope to produce more than 20 billion gallons of ethanol a year for the U.S. market at multiple locations.

The company has more than 30 acres to grow algae at its headquarters in southern Lee County. It plans to produce 100,000 gallons of fuel-grade ethanol a year at the local plant.

The legislative change—proposed by the Department of Agriculture and supported by legislators—would specifically add algae and blue-green algae to the permit requirements. The bill would take effect July 1, absent a veto.

Lee County gave Algenol a \$10 million grant to help the company grow and create jobs locally.

Natural gas pipeline. Florida Power & Light Co. is seeking state approval for a 32-mile natural gas pipeline to provide supply to its new Riviera Beach plant.

The \$150 million pipeline is part of the \$1.3 billion Riviera Beach Next Generation Clean Energy Center now under construction.

The new facility, scheduled to go into service in 2014, will use natural gas continuously.

The Florida Public Service Commission approved the plant in 2008. The pipeline project must also be approved by the Florida Department of Environmental Protection.

If approved, the pipeline will start near FPL's Martin County plant northwest of Indiantown and end at the western end of FPL's existing pipeline at the intersection of the Florida Turnpike and State Road 710.

This project is not related to FPL's proposed \$1.5 billion, 300-mile natural gas pipeline that would have run from Bradford County to Martin County. The Florida Public Service Commission rejected that pipeline project in 2009.

Permit agreement. Environmental groups, the state and Progress Energy Florida have settled a permit dispute regarding the utility's coal-fired power plant at Crystal River.

In October, the Sierra Club and Florida Wildlife Federation challenged a DEP plan to renew a water discharge permit.

The groups said that Progress' discharge of hot water into the Gulf of Mexico damaged the ecosystem and raised questions about whether the utility should take extra steps to protect sea life from getting trapped and killed in water intake systems.

Under the settlement, the permit will now have a shorter renewal period, expiring in August, 2013, instead of the expected 2016 expiration date.

Plus, the company will be required to apply by March 4, 2013, for any future renewals.

Mine expansion. Manatee County commissioners have voted to allow Mosaic Fertilizer LLC to expand its Wingate Creek phosphate mine near Duette.

The company had previously agreed to contribute \$100,000 for a hydrologic

study of wetlands at the nearby Duette Preserve, where headwaters of the Manatee River originate.

The firm will spend another \$100,000 to implement the study's findings, which would bolster existing wetlands in the preserve.

Scientists representing Mosaic said the mining would have minimal effects on land and water. But those representing environmental groups predicted a serious decline in water quality and quantity.

Vero lab privatization? In the future, the city of Vero Beach could contract out lab services now done internally by its water and sewer department.

Bids from two private labs, including Flowers Chemical Laboratories, indicated the city could save at least \$250,000 by contracting out the work.

City manager Jim O'Connor said the city now spends about \$500,000 on lab analyses annually.

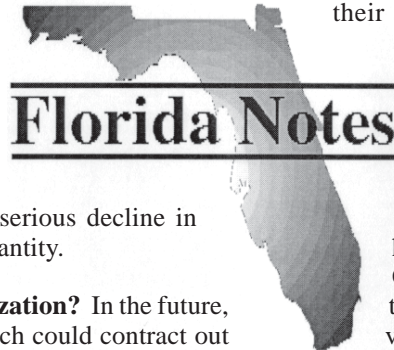
Contracting out lab services was one of the recommendations in an efficiency report completed by the city last year.


Other cost-saving measures planned include the installation of more efficient, high-speed pumps and more cross-training of employees.

People news. Senior project manager Heather Cavanagh, PE, has joined Cornerstone Environmental Group LLC in their newly-established Jacksonville office. She will lead a team to expand services in the Southeast. Cavanagh has 16 years of experience with project implementation and client relations.

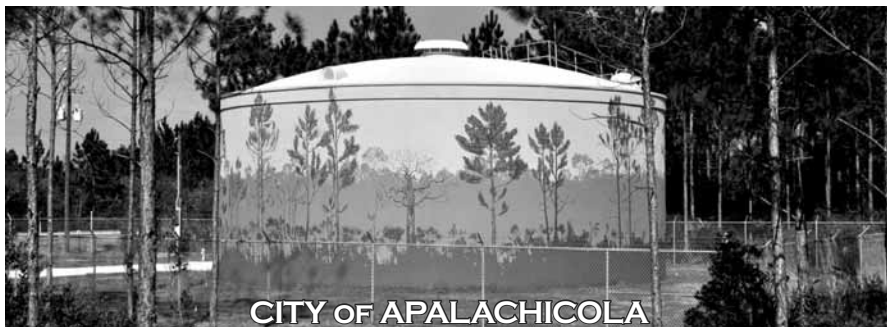
Golder Associates has hired Yaniv Zagagi, MSc, CIH, CSP, as senior project industrial hygienist in its Jacksonville office. He has over 15 years experience in management, implementation, training and enforcement of environmental, health, safety and quality systems.

Sugar cane expert Rob Gilbert has been appointed as the new director of the University of Florida's Everglades Research and Education Center in Belle Glade. Gilbert, an agronomy professor with UF's Institute of Food and Agricultural Services, has been interim director of the Belle Glade center since October 2010.







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South Florida reservoir decision delayed two months for further review

Staff report

The escalating cost estimate for a proposed water supply reservoir in Palm Beach County prompted one official to call for shelving the entire plan.

C. David Goodett, president of the Lake Worth Drainage District's board of directors, urged an end to the reservoir project at the agency's March meeting.

But the rest of the board deferred to a South Florida Water Management District request for 60 more days to study the massive reservoir project.

The South Florida WMD had issued a

statement asking for more time. They feel that the project could provide a valuable water storage area as well as help prevent polluted runoff from reaching the Lake Worth Lagoon during heavy rain events.

The drainage district has spent over \$300,000 on the project to date.

Woody Woodraska, project manager for the drainage district, told the board that SFWMD had asked for additional study time to weigh the merits of the reservoir project.

Since January, utility managers in Broward and Palm Beach counties have voiced concerns about the rising price tag for the

reservoir. One cost estimate approached \$1 billion.

But Woodraska and other water officials say the \$1 billion cost estimate is way out of line. A \$750 million cost is more realistic, but much higher than an early cost estimate of \$451 million.

The proposed reservoir would be built west of Royal Palm Beach in Palm Beach County. It would take in 175 million gallons of water per day. The water would be available to utilities in Palm Beach, Broward and Miami-Dade counties.

The remaining options for Polk are water conservation and finding alternative water supplies including tapping into lower portions of the Floridan Aquifer.

Estimated cost for future projects could be as much as \$1 billion over the next four decades.

Lakes in Keystone Heights. The St. Johns River Water Management District's govern-

ing board approved a pilot project to determine if adding new water to drying lakes in the Keystone Heights area will help alleviate the ongoing problem.

The plan calls for constructing a well at the DuPont Trail Ridge mine at Camp Blanding in Bradford County. Over a million gallons of water a day will be pumped from the lower Floridan Aquifer and into the chain of lakes in Keystone Heights.

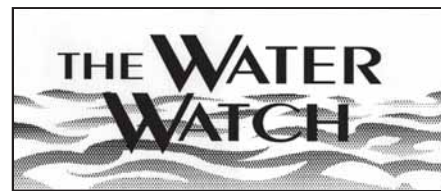
District officials do not envision the plan as a vehicle for restoring lake levels in the area. Rather, they want to determine both how much water evaporates before reaching the lakes and if the additional water improves the lakes' water quality.

As an ultimate solution to improving lake levels, the district is considering the use of highly treated wastewater or surface water to replenish the lakes.

If the lake replenishment pilot project proves effective, it could be utilized elsewhere in other North Florida lakes lying within both St. Johns and Suwannee river water management district territories.

In Bradford County where the well will be drilled, the county commission has voiced opposition. The Bradford Soil and Water Conservation District Administrator Paul Sill said the well should be delayed until possible harm to groundwater levels can be ascertained.

WATCH
Continued on Page 5



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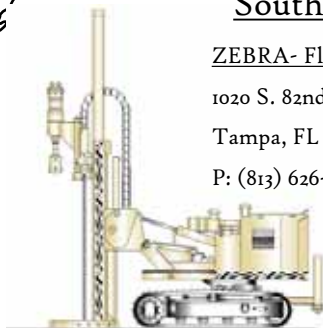
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WATCH

From Page 4

Deadline for levee repairs. Levees in Broward and Palm Beach counties face a deadline for repairs required by the Federal Emergency Management Agency.

The levees are in place to protect populated areas from potential Everglades flooding.

In February, the South Florida Water Management District entered a two-year window to fix the Broward County section of the East Coast Protective Levee. The levee falls short of federal safety standards.

The South Florida WMD, Broward County and eight West Broward cities have three months to finalize an agreement aimed at getting the levees up to federal standards.

The Palm Beach County portion of the levee was also found to be substandard by federal inspectors. Once FEMA reviews are complete, upgrades will likely be required.

The water management district agrees with the need to address concerns with the 60-year-old levee, but they contend it is capable of protecting South Florida population centers from flooding.

The district plans to spend \$13 million to refurbish the 38-mile long Broward section of the levee.

Planned improvements include raising 2,000 feet of the levee by about two feet, reinforcing portions of the outer base, removing vegetation growing on the levee and installing monitoring stations to identify potential erosion.

System offer pulled off the table. In a divided vote, the Indian River County Commission decided to withdraw its offer to buy the city of Vero Beach's water and wastewater system.

The county offered \$24 million for the system to pay off Vero's water and sewer debt. But the city never responded to their offer.

After getting no response from the city, the county elected to pay off its own utility bonds.

Utility Director Erik Olsen estimated that expenditure at \$14 million.

He said reduction in expenses might result in a cut in rates charged to county utility users.

Deerfield Beach water plant delay. A reverse osmosis water processing plant in Deerfield Beach is over 300 days behind schedule and the city wants \$600,000 in damages for delays in the \$7 million project.

Charles DaBrusco, director of public works and environmental services for the city, said he is asking Downright Construction for the damages. He is seeking a change order in the contract reducing the last payment by \$600,000.

Water from the RO facility and two new wells that went on-line in January will add 4.5 million more gallons in capacity to the city's water distribution system.

Judge finds for HDR in Tampa reservoir suit

Staff report

A federal jury ruled in early April that HDR Engineering Inc. did not breach its standard of care in designing the C.W. Bill Young Regional Reservoir.

"Saying we are disappointed is an understatement," said Tampa Bay Water General Manager Gerald Seeber. "HDR certified its design and the construction to the state, so we believe HDR is liable."

TBW board members said they don't know whether they will appeal the case.

The lawsuit was filed by TBW in December 2008 against reservoir designer HDR Engineering, Inc., contractor Barnard Construction and construction manager CDG, due to abnormal cracks in the reservoir's interior soil-cement lining.

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

Bio-recycling in Charlotte. Charlotte County's Public Works-Solid Waste Division has signed a lease agreement with Synagro Technologies of Houston to develop a regional biosolids and green waste Bio-Recycling Center at the county's Zemel Road landfill near Punta Gorda.

Under terms of the the 20-year agreement, Synagro Technologies will design, finance, build and operate a composting facility that will recycle 50,000 tons of biosolids annually.

The facility will produce Class AA compost and will be available to biosolid generators in the region.

Pamela Racey, Synagro's vice president of sales and development, said the facility will help local communities fulfill critical local environmental requirements.

New SJRWMD board member. Ocala attorney Fred N. Roberts Jr. has been named by Gov. Rick Scott to the St. Johns River Water Management District governing board.

He succeeds Arlen Jumper of Ocala. Roberts, 33, has been a member of the Klein & Klein law firm in Ocala since 2006.

The appointment must be confirmed by the state Senate. The term would run through March 1, 2015.

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AMEX Environment & Infrastructure Inc. 3901 Carmichael Ave. Jacksonville, FL 32207 (904) 396-5173 Fax: (904) 396-5703 Jason Goldstein, Drilling Dept. Manager jason.goldstein@amec.com www.amec.com	0.84	55	3000/ 390	Drilling and push probe, geophysics, testing of soil and rock, geo-hydrology	■	■			■	■		1) Comprehensive, innovative solutions for environmental compliance, management and remediation. Our architectural, engineering and facilities management expertise enables us to excel at defining and designing A/E projects. 2) Environmental and geotechnical services 3) NA 4) Dilatometer testing 5) Serves entire state
ATI Companies LLC 4610 Central Ave. St. Petersburg, FL 33711 (727) 328-0268 Fax: (727) 328-2477 Carlos Lemos, President info@ambienttech.com www.ambienttech.com	1.0	19	40/27	Environmental & geotechnical drilling, (Florida and Central America); rock coring (Central America); concrete coring and drilling	■	■			■	■		1) Central America office in Panama 2) NA 3) MBE, SDB, DBE 4) Utility locate capabilities 5) Serves Central Florida
Boart Longyear Drilling Services 5785 SW 6th Pl. Ocala, FL 34474 (954) 347-1266 Fax: (352) 237-6551 Randy Conrad, Business Development rconrad@boartlongyear.com www.boartlongyear.com	0.57	129	11,431/ 24	The world's largest contract drilling company, specializing in sonic drilling	■	■	■	■	■	■		1) NA 2) Sonic drilling 3) NA 4) NA 5) Serves entire state
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Earth Tech Drilling 2703 NW 19th St. Pompano Beach, FL 33069 (954) 974-2424 Fax: (954) 974-2423 Bob Orlando, President borlando@earthtechdrilling.com www.earthtechdrilling.com	0.98	10	9/9	Environmental and geotechnical drilling	■	■	■	■	■	■	■	1) NA 2) Quality, safe environmental drilling 3) NA 4) NA 5) Serves entire state
Ellis & Associates Inc. 7064 Davis Creek Road Jacksonville, FL 32256 (904) 880-0960 Fax: (904) 880-0970 Michael Lithman, PE, Executive VP m.lithman@ellisassoc.com www.ellisassoc.com	NA	41	58/54	Geotechnical and environmental drilling services, consulting engineers and scientists (EB998; GB 265)	■	■				■	■	1) Falling head permeability test, double ring infiltrometer test, drawdown modeling 2) Geotechnical, construction, material testing and environmental engineering 3) NA 4) Large diameter hollow stem auger 5) Serves Central, NE and NW Florida
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Groundwater Protection 2300 Silver Star Rd. Orlando, FL 32804 (407) 426-7885 Fax: (407) 206-0856 Charles Bucher, General Manager charles@drillprollc.com www.groundwaterprotection.com	0.86	26	25/25	Monitoring and remediation well installation; injection and well abandonment services; horizontal well installation. Auger, DPT, sonic horizontal directional angle drilling	■	■			■	■		1) Remediation systems, injection 2) Sonic, difficult access/low clearance angled wells 3) FL Water Well Contractor, NC/SC Water Well Contractor, Underground Utility Contractor, Bonded in GA 4) Well abandonment 5) Serves entire state
Hayward Baker Inc. 6850 Benjamin Rd. Tampa, FL 33634 (813) 884-3441 Fax: (813) 884-3820 Bill Lombardi, Environmental Supervisor wlombardi@haywardbaker.com www.haywardbaker.com	0.80	31	1250/ 200	In-situ solidification/stabilization, in-situ soil mixing, in-situ bioremediation								1) Multi-point direct push injection, mass soil mixing tool 2) Geotechnical construction 3) NA 4) NA 5) Serves entire state
HSA Engineers & Scientists 4019 E. Fowler Ave. Tampa, FL 33617 (813) 971-3882 Fax: (813) 971-1862 Kim Lamrouex, Corp. Marketing Manager klamrouex@hsa-env.com www.hsa-env.com	0.95	23	300/ 269	HSA's array of management and design services include environmental, geotechnical, electrical, mechanical and structural engineering, construction services, demolition, water resource management, materials testing, drilling and geophysics	■	■			■	■		1) A variety of litigation and insurance support services including indoor air quality, toxic tort, large loss and natural disaster assessment, structural evaluations and accident reconstruction, ground subsidence investigations 2) NA 3) HSA's dedicated drilling personnel use their combined experience and knowledge of soil conditions to devise appropriate method and scope of exploration for your site investigation 4) NA 5) Serves entire state

Fort Pierce officials hope brownfield will spark economic lift

By DAN MILLOTT and MELORA GRATAN

As Florida towns go, Fort Pierce is an older city. Nearly 100 years ago they received electricity from the H.D. King Power Plant that produced power by burning coal, oil and natural gas.

But time has passed the old plant by. A nuclear reactor on nearby Hutchinson Island and other new power-producing facilities have signaled the end for the H.D. King plant.

The plant was demolished in 2008, but its decades of use left the soil loaded with toxic materials.

Earlier this year, the Fort Pierce City Council approved the designation of eight acres in the center of town as a brownfield site.

The old power plant location is part of the property that faces the Indian River with Moores Creek flowing through its center.

Jon Ward, director of urban development for the Fort Pierce Redevelopment Agency, envisions creating a mini-version of San Antonio's Riverwalk there.

But before that happens, a massive cleanup is required.

Ward said there is a laundry list of contaminants in the soil including arsenic, lead and petroleum contamination as well as polychlorinated biphenyl, once used as

a coolant for transformers, and now classified as a carcinogen.

The main site is one of three separate land parcels in a larger brownfield area that has received about \$600,000 in funding from the U.S. Environmental Protection Agency.

Earlier this year, Fort Pierce's City Council approved the designation of eight acres in the center of town as a brownfield site. The location is part of the property that faces the Indian River with Moores Creek flowing through its center. But before redevelopment can move forward, a massive site cleanup is required.

contaminated with arsenic and chromium.

A second site contained a hotel, a transformer and a natural gas yard with metals in the soil and methylphenol and metals in the groundwater.

Greg Schultz, PE, senior project manager for Cardno TBE, the firm handling the cleanup, said the remedial work at the first two sites is virtually complete and will soon be submitted for approval.

The remaining site is the most highly impacted with contaminants in the soil and groundwater including metals, vinyl chloride, isopropyl, benzene and PCBs.

Schultz said there are limited areas where the PCB's are above threshold levels so materials have to be transported to a landfill.

To determine the scope of the contaminated area, Cardno is using a mobile lab as a screening tool in tandem with an off-site fixed lab.

"The mobile lab will help us get us data on the extent of the contamination so we can estimate the costs and plan better. It

also helps to speed up the process," said Schultz.

The city's goal is to get the site ready for development when economic conditions improve. Ward estimates it will take another 12 to 18 months for the sites to be redevelopment-ready.

Fort Pierce still needs approval from the Florida Department of Environmental Protection on the city's brownfield designation.

Once that happens, they can pass along tax credits options for job creation to potential developers.

One of the sites once contained cooling towers and a chemical storage facility that is now

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Huss Drilling Inc. 35920 State Road 52 Dade City, FL 33525 (352) 567-9500 Fax: (352) 567-6646 Stephanie Stallsmith, Office Manager stephanie@hussdrilling.com www.hussdrilling.com	0.81	21	23/23	Environmental, geotechnical, exploration and sonic drilling	■	■		■	■	■		1) Barge services, difficult site access equipment, wireline coring 2) Sonic drilling 3) NA 4) NA 5) Serves entire state
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ZEBRA Environmental Corp. 1020 S. 82nd St. Tampa, FL 36619 (813) 626-1717 Fax: (813) 626-1718 Mike Early, Branch Manager mikee@zebraenv.com www.teamzebra.com	0.96	20	50/8	All aspects of DPT drilling and sampling, injections, well installations and direct sensing data collection. Fleet of over 27 DPT units including the newest Geoprobe [®] 7822 and 8040 models.	■	■			■	■		1) UVOST/LIF technology 2) DPT: Sampling, injections and installations; Direct Sensing: MIP, HPT, CPT, EC; Injection services; Installation services. Prepacked screens, soil vapor implants, reinjectable remediation; CMT; Drilling services 3) NAICS 562910 & WOSB 4) MIP - Membrane interface probe 5) Serves entire state

Multi-agency partnership effort spearheads Rose Bay recovery

By PRAKASH GANDHI

One of East Central Florida's ecological jewels is shining again thanks to a major 20-year restoration plan that's finally reached completion.

For years, Rose Bay in Volusia County fell victim to leaking septic systems, stormwater runoff and other troubling environmental issues. But now, thanks to a coordinated effort by residents and government officials, the bay's future looks bright.

"It's a tremendous story of grassroots efforts that helped bring new life to a very important natural asset," said Kent Donahue, special assistant to the Port Orange city manager.

In the years before Florida's explosive growth, Rose Bay was a productive estuary along the Halifax River in Volusia County.

Good water quality and the bay's close proximity to the Atlantic Ocean once pro-

vided vital nursery grounds for many fish species.

But the bay's beauty and productivity became degraded over time. Stormwater runoff carried nutrients such as fertilizers, sediments such as dirt, pieces of asphalt and pollutants such as grease and chemicals into the bay.

Wastewater leaking from residential septic systems also seeped into the bay. This nutrient pollution fueled algae blooms that have clouded the water and added to a layer of organic sediment throughout the bay.

In addition, two causeways were constructed that reduced water flow and circulation in the bay.

In an attempt to reverse the degradation of the bay, the St. Johns River Water Management District, the city of Port Orange and Volusia County established the Rose Bay Task Force, coordinating efforts to address the bay's pollution.

Officials developed a comprehensive outline for a five-point restoration plan

and established partnerships with the Florida Department of Transportation and the U.S. Army Corps of Engineers.

Working with the water management district, Volusia County and the state DOT, the city of Port Orange has addressed stormwater discharges into Rose Bay.

By combining treatment projects with road improvements and sewer installations, the city has provided better stormwater management throughout the bay's watershed, said Hank Largin, a spokesperson for the St. Johns River Water Management District.

Projects to retrofit stormwater swales in the communities of Harbor Oaks and Allendale have provided the neighborhoods with improved drainage and water quality treatment, Largin said.

Port Orange, Volusia County and the district have formed partnerships to buy and develop a series of stormwater parks, where runoff is stored and treated before being discharged into Rose Bay.

The city of Port Orange, with district assistance, completed a project that allows water from four stormwater ponds to be diverted to the city's water reuse irrigation system.

The project reduces the volume of stormwater flowing into Rose Bay by over a million gallons a day. Largin said it also increases the city's reuse water supply and provides additional floodwater storage capacity.

Through Port Orange's Utilities Department and with state legislative assis-

tance, city-supplied sewer service has been provided to residences and businesses in the Rose Bay area.

Largin said the district also coordinated with the corps and Volusia County to develop and implement a habitat restoration plan.

Completed in 2011, the project removed accumulated sediments to allow a highly productive oyster-based habitat that once flourished in the bay to be reestablished.

Donahue had high praise for nearby residents who initiated the bay restoration effort.


"They were the ones that started lobbying local governments and the St. Johns River Water Management District to get this restoration started," he said.

The restoration included the installation of new sewer lines that have replaced septic tanks, new water lines, new retention ponds, and most recently dredging work.

"Rose Bay is a very valuable asset to Port Orange and Volusia County," added assistant city manager Shannon Lewis. "This restoration gives the bay new life."

Paul Haydt, senior project manager for the St. Johns district, said the restoration of Rose Bay is a great example of a multi-agency partnership.

"This project is significant because the restoration was not simply Rose Bay but the entire urban watershed through the development and implementation of a five-point restoration plan," Haydt said.



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EPA releases final air toxics standards

Staff report

The U.S. Environmental Protection Agency released its much anticipated Mercury and Air Toxics Standards Rule.

This rule is expected to be the big fix for what the agency described as the 40 percent of large coal-burning power plants responsible for 75 percent of the acid gas air emissions in the U.S.

Other contaminants include an estimated 20 tons annually of mercury, as well as arsenic, cadmium, nickel and other "dangerous pollutants" described in an EPA background report.

The general requirement of the new rule is that air emissions standards are to be pegged to the performance of the top 12 percent of U.S. utilities.

The rule asks utilities to use the best available technology to meet its requirements. It gives utilities four years to comply, and includes provisions for some to request additional time.

The rule applies to large coal and oil burning plants, those generating at least 25 megawatts.

In its cost-benefit analysis, EPA said the new rule will prevent 4,200-11,000 premature deaths each year, and many thousands of non lethal respiratory and cardiovascular episodes responsible for as many as 540,000 sick days annually.

The EPA pegged the cost of regulatory compliance at a bit less than \$10 billion and notes \$3 - \$9 in health benefits for each dollar spent.

The rule will apply to about 600 plants nationwide. According to EPA, Florida had 26 coal- and oil-burning plants that could have been affected by the rule before it was finalized.

FPL's Frontenac plant was demolished in 2011, and is being replaced with a gas burning plant. Many other more recent coal- and oil-fired facilities in Florida have been built or upgraded to meet most or all of the rule's new requirements.



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Lake Trafford flourishing after corps, district restoration effort

By SUSAN TELFORD

Edward Oleski understands the importance of a healthy lake and its impact on the surrounding community. After fish kills several years ago due to the lack of oxygen in the 1,600-acre Lake Trafford in Southwest Florida, he had to take a serious look at how he could continue to operate Lake Trafford Marina, a business based on fishing and boat rentals, even after reoccurring fish kills, hydrilla and nuisance alligators had taken over.

"The fish kills really hurt the income. That's when we changed over to airboats. We needed to come up with something to help us stay in business," said Oleski. "It was about that same time that we all started talking about how we could get the lake back to the way it used to be."

A year has passed since the South Florida Water Management District and its partners completed a major restoration effort on the popular lake. Scientists are reporting burgeoning signs of success.

Monitoring efforts have identified numerous improvements in aquatic plant growth and plankton populations, plus improved visibility and more wildlife and bass.

"The bulrush and tape grass are growing great. Our bird population is big again and the crappie fishing is improving," he said.

One of the most successful components of the lake's restoration has been the planting and subsequent recovery of submerged aquatic vegetation. Well-established aquatic plants prevent sediments from clouding the water and blocking sunlight, which is vital to plant growth.

Plants also provide the primary habitat for fish and invertebrates, critical components in the food chain for wildlife, such as wading birds.

At one time, the lake was sand-bottomed, but nutrient runoff in the water-

shed resulted in a shift from native aquatic vegetation to dense mats of hydrilla, an invasive exotic plant.

Herbicides used to control the hydrilla and dead plant material accumulated on the bottom of the lake, releasing additional nutrients. This triggered algae blooms, degrading prime spawning habitat for native fish.

The blooms also reduced the lake's dissolved oxygen levels, resulting in periodic fish kills.

Lake Trafford, Florida's largest lake south of Lake Okeechobee, is the headwaters of several important ecosystems including the Corkscrew Swamp-Imperial River, the Cocohatchee River and the Camp Keals Strand-Panther Refuge.

Congress approved this critical ecosystem restoration project as part of the Water Resources Development Act of 1996 to improve the health of the lake and restore its native plant and animal communities.

SFWMD and the U.S. Army Corps of Engineers signed a project cooperation agreement in 2000 to cost-share the design and construction.

SFWMD began the first phase of lake dredging in 2004, with a focus on its center, completing the project two years later.

The first phase of the \$21.4 million project began with removal of three feet of muck from the lake bottom.

A second muck removal effort began in November 2006 for the shore area, and after being suspended due to drought conditions in 2007, was recently completed.

The successful restoration of Lake Trafford was achieved through public organizations, local citizens, public agencies, and private organizations working together to restore this valuable natural resource.

"Lake Trafford used to be one of the premier bass lakes in the state of Florida," said Oleski. "I'm really happy to see the lake coming back."

Study: Glades polluters not paying fair share

By DAN MILLOTT

The Everglades Foundation, backed by an \$185,000 study, said agricultural polluters are not paying their fair share of Everglades cleanup costs.

Brian Crowley, a spokesperson for the foundation, said the message to polluters was made loud and clear 16 years ago.

"In 1996, 68 percent of Florida voters approved the 'polluter pays' constitutional amendment that requires that those who pollute in an agricultural area must pay the cost of cleaning up that pollution."

The foundation wanted an outside group to study the matter so they retained Durham, NC-based RTI International.

Crowley said the main goal of the study was simple.

"We wanted research that obtained factual information on who pollutes in the Everglades and who is paying for the cleanup of that pollution," he said.

The RTI study was completed in late 2011 and released in March.

The study revealed that agricultural producers are responsible for 76 percent of the phosphorous flowing into the Everglades, but pay just 24 percent of the cleanup cost.

That means that taxpayers and local utility customers pay over three-quarters of the estimated \$106 million annually to remove phosphorous from stormwater that flows into the Everglades.

Crowley noted that the study was not some kind of "gotcha" investigation. "All the RTI research was based on public documents," he said.

Responding to the study, major sugar producers claim that the region's farmers have contributed more to Everglades restoration than any other private group.

They noted \$200 million in taxes have been imposed on farmers in the Ever-

glades Agricultural Area south of Lake Okeechobee.

U.S. Sugar, Florida Crystals and the Sugar Cane Cooperative of Florida chided the study in a statement.

"While farmers are putting our money to work cleaning water and achieving real restoration results, the Everglades Foundation continues to waste valuable dollars on useless studies, which are voided by grossly flawed assumptions, resulting in hocus-pocus economic conclusions."



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DISTRICTS

From Page 1

cept of the state's water districts.

"What happened goes far beyond a governor trying to put his own people in there," said Sonny Vergara, a former executive director of the Southwest Florida Water Management District.

Powerful lobbyists for business, industry and agricultural interests and other connected individuals have told Gov. Scott and his "young" transition team that all regulations are bad and will prevent the state from climbing out of the recession, Vergara said. "They said they needed to create jobs and went after growth management. They dismantled growth management and then went after regulation in general."

The water management district concept uses appointed citizens through governing boards to manage water resources in their region, explained Vergara. The legislature has recently been trying to gain more control over their budgets.

One of the first things Gov. Scott implemented at Swiftmud was to dismantle the basin boards and consolidate the nine sub-taxing basins into one, using tax money from one area to pay for projects in another area.

"I don't like this," Vergara said. "It is insidious and vindictive, and not in the best interests of the people of Florida or the economy. They are changing them (the districts) into state agencies, which will create a bureaucratic mess."

While Vergara said the new district directors have little to no water management experience, others expressed optimism for future policy decisions.

"Melissa Meeker and her leadership team (at the South Florida WMD) are definitely a step in the right direction," said John Fumero, managing partner with Sundstrom, Friedman and Fumero LLP. "In my view, they have brought a balanced and solution-oriented approach to water resource problems."

Meeker is the new executive director of the SFWMD.

Fumero admits that while he is pleased with having fresh ideas and approaches, he does not like the loss of vast amounts of institutional knowledge. Between Barr and former Suwannee River WMD Executive Director David Still alone, you have more than a half century of water management experience, he said.

The agency has lost a lot of institutional knowledge all at once, Vergara said. "They will be learning things that were learned 20 years ago and are going to make mistakes."

At the same time, Vergara said he is not against making staff cuts, but they should have been carried out in more gradual and "humane" manner.

The staffing and budget cuts in 2011 were brutal, agreed Estus Whitfield, a former environmental advisor to five Florida governors. "Instead of using a meat cleaver, they (legislators) used a chain saw. There was no real thought other than cutting things down to size—or even below size."

In addition to top management, positions cut included scientists and lawyers with a lot of experience and knowledge that could make a big difference in the future. Whitfield believes this difference will begin to show in the next three or four years, when clear evidence of the districts being "eviscerated" will be obvious.

The state will be in trouble at some point if the districts are not allowed to raise taxes enough to do their job, because there is nothing to replace them. For this reason, Whitfield does not feel there is a serious effort to completely eradicate the districts.

"But there is a very strong effort to put them totally under the thumb of the state, he said. "It is no accident that the five directors are gone."

The effort's goal is to in essence put a straight jacket on the districts so that everything they do is vetted and approved by Tallahassee, he continued. The accumulated resentment by the regulated community for 30 years of environmental regulators doing their job may have simply hit its tipping point.

Whitfield explains how the districts were virtually autonomous 20 years ago and then gradually had to submit budgets for review to the Governor's office and the Legislature for approval. Then in 2011, the Legislature took control over the budgets too, he said. This loss of local control was one of many blows to environmental laws during last year's session.

"The year 2011 was a disaster for the Florida environment," said former U.S. Sen. Bob Graham. "Forty years of constructive protection of important resources, especially water, were wiped off the statute books."

In addition to changes impacting the districts, the session abolished community affairs, eliminated growth management, unfunded the Florida Forever program and reversed the burden of proof test for environmental permitting.

These changes concerned Graham so much that he became a founder and chairman of the Florida Conservation Coalition.

Five of the new organization's seven priorities involve water including: restoring reasonable funding for Florida's water management districts, managing water resources at the regional level, promoting efficient use and conservation of water, opposing efforts to privatize water and reaffirming the state's commitment to restore the Everglades.

With regard to the Everglades, Graham points out that if decision making for water management is shifted to Tallahassee, entering into long-term partnerships with federal entities such as the U.S. Army Corps of Engineers would become much more difficult. In turn, this kind of difficulty could be disastrous for lengthy restoration efforts in places like the Everglades, and long-range planning and policy in areas such as wetlands.

Graham said the Florida Conservation Coalition was instrumental in achieving some positive action during the 2012 Legislative Session and preventing more negative actions. Specifically, some authority transferred to the Legislature from the districts was returned and the restriction on local taxes was lifted.

Graham gave credit to Gov. Scott for these positive results, along with recommending the re-funding of Florida Forever, which has helped the districts acquire flood plains and security against inappropriate development.

"2012 has a glimmer of hope," Graham said. "At least the mops are out. I hope that once people have seen their mistake they will become committed to reversing it, but it will be awhile."

The FCC will continue to focus on wa-

DISTRICTS

Continued on Page 13

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Calendar

May

May 3-5—Conference: 2012 Florida Ground Water Association Convention and Trade Show, Orlando, FL. Call (850) 205-5641 or visit www.fgwa.org.

May 5—Course: Backflow Prevention Recertification Review, Bradenton, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 7—Course: Asbestos Refresher: Project Design, Dania Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

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

May 8—Course: Asbestos Refresher: Inspector, Dania Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 8—Course: Asbestos Refresher: Management Planner, Dania Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 8-9—Course: Biological and Chemical Nutrient Removal: A Study of Nitrogen and Phosphorus Removal, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 8-10—Course: Introduction to Electrical Maintenance, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 9—Conference: Florida Remediation Conference-South, North Miami, FL. Presented by NTCC Inc., publisher of the *Florida Specifier*. Call (407) 671-7777 or visit www.enviro-net.com.

May 9—Course: Asbestos Refresher: Contractor/Supervisor, Dania Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

May 14-18—Course: Backflow Prevention Assembly Tester Training and Certification, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 15-17—Conference: From Stem to Stern II: Boating and Waterway Management in Florida, Clearwater Beach, FL. Presented by Florida Sea Grant. Contact Betty Staugler at (941) 764-4346 or visit www.flseagrant.org.

May 16—Course: 4-Hour Refresher Course for Spotters at Landfills, C&D Sites and Transfer Stations, Winter Haven, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 16—Course: 8-Hour Training Course for Spotters at Landfills, C&D Sites and Transfer Stations, Winter Haven, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 16-17—Course: Initial Training Course for Transfer Station Operators and Material Recovery Facilities - 16 Hour, Winter Haven, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 16-19—Course: Backflow Prevention Assembly Tester Training and Certification, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 17—Course: Lead: Renovation, Repair & Painting, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 19—Course: Backflow Prevention Recertification Review, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 21-24—Conference: 37th Annual Conference of the National Association of Environmental Professionals, Portland, OR. Visit www.naep.org.

May 22-23—Course: Microbiology of Activated Sludge, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

May 23-25—Meeting: Florida Society of Environmental Analysts 2012 Spring Meeting, Clearwater Beach, FL. Call (386) 411-3111 or visit www.fsea.net.

May 25—Course: Backflow Prevention Recertification Review, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June

June 1-2—Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 2—Course: Backflow Prevention Recertification Review, Bradenton, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 2-10—Course: Backflow Prevention Assembly Tester Training and Certification, Jacksonville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 4—Course: Backflow Prevention Recertification Review, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 4—Workshop: Florida Brownfields Redevelopment Workshop, Alachua, FL. Hosted by the Brownfields Communities Network in association with the National Association of Local Government Environmental Professionals. Visit www.nalgep.org.

June 5—Course: Backflow Prevention Recertification Exam, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 5-6—Course: Pumping Systems Operation and Maintenance, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 6-8—Course: Backflow Prevention Assembly Repair and Maintenance Training and Certification, Lake Buena Vista, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 7—Course: Backflow Prevention Recertification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 7—Course: Unidirectional Flushing Techniques, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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June 9—Course: Backflow Prevention Recertification Exam, Bradenton, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 11-13—Course: Asbestos: Inspector, Gainesville, FL. Presented by the University of Florida

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

June 13-15—Conference: Florida Association for Water Quality Control Annual Conference, Naples, FL. Call (813) 623-6646 or visit www.fawqc.com.

June 14—Course: Lead: Renovation, Repair & Painting, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 14-15—Course: Asbestos: Management Planner, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 18—Course: Introduction to Backflow Prevention, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

June 18-21—Conference: 23rd Annual Conference of the Florida Lake Management Society, Gainesville, FL. Contact Maryann Krisovitch at flmshome@aol.com or visit www.flms.net.

June 19-20—Course: Cross-Connection Control: Survey and Inspection, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352)

392-9570 or visit www.treeo.ufl.edu.

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

June 21-22—Course: Cross-Connection Control: Ordinance and Organization, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit www.treeo.ufl.edu.

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

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

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EPA proposes new carbon pollution standards for power plants

By ROY LAUGHLIN

The U.S. Environmental Protection Agency recently released proposed standards for carbon dioxide and greenhouse gas emissions.

The proposal sets standards based on American-made technology that must be incorporated into new electrical generation plants that burn fossil fuel.

If the new rule is accepted, electricity generating plants will be allowed to release 1,000 pounds of CO2 per megawatt hour. This is the emission rate for 95 per-

cent of existing U.S. natural gas-powered electrical generating plants.

The rule has a number of exceptions. It applies only to generating plants larger than 25 megawatts that sell the electricity generated. Plus, it applies only to new power plants whose construction begins more than a year from now.

Also excepted are existing units including modifications such as changes needed to meet other air pollution standards.

The proposed rule does not apply to new units in non-continental areas such as

Hawaii. Finally, it does not apply to generating plants that burn biomass only.

The rule clearly promotes natural gas-fueled power generation by designating its characteristic performance as the target for CO2 emissions. But, the EPA said that the new rule outlines "a path forward for new technologies that would allow burning coal as fuel while limiting CO2 emissions."

The typical coal-burning electricity generating plant emits about 1,800 pounds of CO2 per MWh gross, so to meet the proposed rule, emissions will have to be cut in half. Reductions imply carbon capture and storage. The proposed new rules may allow plants to meet CO2 emissions over the expected 30-year lifetime of a new plant.

Plant operators may use several years of increased CO2 releases to optimize CCS technology that will be lower than the 1,000 lb CO2 MWh gross in latter years.

The EPA, in its rule explanation says that CCS is expected to become more widely available, which should lead to lower costs and improved performance over time.

In 2011, 42 percent and 25 percent of U.S. electricity was generated using coal and natural gas, respectively, according to the U.S. Energy Information Administration. The EPA's proposed rule may therefore be seen as focused primarily on coal.

The EPA said its new rule does not propose any radical requirements on the use of coal to generate electricity.

It describes its proposed rules as "flexible" and notes that it will require "deployment of the same types of modern technologies in steps the power companies are already taking to build the next generation of power plants."

The EPA said that even without issuing the proposed rule, currently proposed new power plants would comply with the standards.

They therefore did not provide a cost estimate of compliance, simply stating that compliance costs are zero for its proposed rule.

Florida's available coal use statistics are based on data obtained between 2005 and 2008. In 2005, Florida had 40 coal burning plants statewide, with a capacity of 11,382 MW. This is about 19 percent of the state's total electrical generating capacity.

Slightly over 50 percent of Florida's electrical utility plants' generating capacity comes from natural gas. When imported power is included in Florida's electricity consumption, coal generating plants account for a third of the state's use.

Florida consumers will not be completely isolated from the EPA's proposed rules for use of coal for electrical power generation, but the influence, if any, will be diluted by the state's substantial additional reliance on natural gas and nuclear power for electricity generation.

This proposed rule is a result of a Supreme Court decision in the final weeks of the Bush-Cheney administration. That decision required the EPA to determine if carbon dioxide and other greenhouse gases were air contaminants under the provisions of the Clean Air Act.

In 2009, the EPA issued a report stating that carbon dioxide and greenhouse gas pollution threatens Americans' health and welfare and are therefore subject to regulation under the Clean Air Act.

The current rule fulfills the Supreme Court's requirement that the EPA should regulate greenhouse gas emissions under the CAA.

The city will be allowed to move forward with soil removal near the tower but some additional groundwater analysis was requested by DEP to complete the site assessment for groundwater at the preserve.

City Engineer Leland Dicus could not be reached for comment in April. But Largo officials say they are preparing a soil removal plan for the observation tower area and a scope of services for additional groundwater analysis required at the preserve.

DEP officials said the city has been very cooperative in trying to clean up the site.

"We have been working cooperatively with the city of Largo and have been in constant communication to answer questions and provide guidance to help the city finish the site assessment and move forward with the cleanup," said department spokeswoman Ana Gibbs.

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LARGO
From Page 1

that they needed to do more testing on soil and groundwater in the preserve. That notice came four years after Largo submitted its previous cleanup actions for state approval.

The U.S. Environmental Protection Agency conducted several tests at the former landfill site in the early 2000s and decided not to classify it as a Superfund site. It forwarded its findings to the DEP.

The entire park was closed from 2010 until January due to a stormwater treatment pond project. City officials are hoping the nature preserve could be open to the public later this year.

The state agreed with many of the city's environmental assessment conclusions but outlined some additional steps for the city to take on both the landfill and the nature preserve site.

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FAU center looks to turn the power of ocean current into electricity

By **BLANCHE HARDY, PG**

Florida's Office of Energy recently published its first annual report under the Florida Department of Agriculture and Consumer Services, which assumed oversight of the state's energy office in 2011.

The report follows the state Legislature's recently passed HB 7117 containing the first comprehensive energy strategy since 2008.

The report provides details regarding the state's energy consumption and future energy outlook.

Among the data presented is the U.S. Department of Energy's ranking of Florida as the third greatest consumer of electrical energy. Floridians and visitors consumed roughly 4.5 percent of the nation's total of 95 quadrillion BTUs.

Although national studies identify biomass and photovoltaic energy as the currently available renewable technologies most likely to succeed in Florida, the report lists three developing technologies: battery storage, ocean energy and wind as having the potential to "radically change Florida's electric energy."

DISTRICTS

From Page 10

district issues, as well as growth management and refunding the Florida Forever program, he said.

Linda Young, the director of the Clean Water Network of Florida Inc., hopes that the FCC can help bring these kinds of environmental concerns to the attention of the public, as well as the legislators and the Governor's office.

Young said she was far from an advocate of the districts or Doug Barr, but worries about the new administration.

"I wonder if Rick Scott wants more free-style giveaways of our resources and where that will put us," she said.

Fumero agrees that whoever is in charge will face some tough times ahead

REEFS

From Page 1

Division of Marine Fisheries Management, Artificial Reef Program, said that continued monitoring indicates that fish from the Oriskany are now below the 20 parts per billion standard for PCBs in fish, although some fish samples collected within the first two years had PCB levels above 50 ppb, the federal standard.

That occurrence has caused Florida authorities to be cautious when selecting and preparing ships used in artificial reef projects.

The U.S. Navy's SINKEX program is one of the most controversial ship sinking programs. Decommissioned military vessels are used for target practice that ultimately leads to their sinking.

The Navy views SINKEX as a military exercise. Others outside the program view it as a disposal program for which better alternatives exist. The activity occurs in open oceans 50 nautical miles from shore at depths exceeding 6,000 feet.

The Navy does not sink all of its old ships in SINKEX. Ships sunk in that military exercise do not become artificial reefs.

It is noteworthy that the Navy did not conduct a single SINKEX exercise in 2012, and in 2010, only four were sunk.

But the Navy may sink decommissioned vessels in shallow water for reefs, and in those cases, works closely with states and local jurisdictions to meet their requirements for artificial reef construction using steel vessels.

"I appreciate the distinction between shipwrecks and artificial reefing, and between SINKEX and reefing. We comply with public health requirements. Sinkex is more of a military operation," said Mille.

That is the critical distinction between artificial reef programs in Florida and others that are variants on disposal.

The EPA sets standards for the Navy to follow when disposing of ships for SINKEX and the Navy administers its own compliance. That may include modeling

Florida Atlantic University's recent designation as one of three National Marine Renewable Energy Centers places Florida squarely in the forefront of ocean energy development.

"As one of three national marine renewable energy centers designated by the U.S. Department of Energy, (the center) is viewed as a leadership organization in this new, growing energy sector," said FAU's Camille E. Coley, JD, assistant vice president for research and associate director for the Southeast National Marine Renewable Energy Center.

"By working closely with the other two national centers, as well as with national laboratories, industry and the academic community, SNMREC is able to leverage advances in technology and create new opportunities for Floridians more effectively than would a stand-alone organization."

SNMREC will focus on the Gulf Stream's Florida Current as an energy generation source, Coley said.

"Analysis of observations of the Florida Current, combined with results from computer simulations of its behavior, suggest that it may be possible to produce enough electricity from this reach

in terms of public policy decisions.

"This is a challenging time for the districts because we have new and stricter standards being applied throughout the state and most regions are facing future water supply challenges."

However, there is cause for hope, according to Whitfield.

"It is going to take a deep, thorough understanding of the relationship of the districts to the water and the state," he said. "The districts are linchpin to all of that and when the executive branch understands that, some adjustments will be made and we will be on a positive path."

Neither the Governor's office or Associated Industries responded to repeated requests for interviews or written statements for this article.

bioaccumulation and monitoring, such as was the case with the Oriskany.

For its artificial reef projects, the FWC evaluates vessels carefully for their suitability for placement at the planned site, qualities such as fish habitat, and the ability to be cleaned up before placement.

Fuel and lubricants are removed and cleaned from the ship. Copper equipment, brass and mercury-containing materials are removed and sold for scrap.

PCB contamination is a special problem because these toxic substances are bioaccumulated readily and are widely dispersed in ship components.

PCBs were used in electrical components and to fireproof gaskets and insulation. Capacitors, transformers and other sources of bulk PCB, if they even still occur on ships, can be physically removed. Removing insulation, gaskets, paints and other materials impregnated with PCBs is another level of effort completely.

The use of PCBs was abandoned in 1977. Mille says that PCBs will be less of an issue in Florida artificial reef programs in the future because so many of the ships built between 1930 and 1977 have already been decommissioned. Candidate ships today increasingly were built after 1980 and were not built of materials containing PCBs.

Artificial reefs, according to Florida Sea Grant, are valuable economic resources for coastal communities.

A 2001 study of artificial reefs in Southeast Florida estimated that residents and visitors spent \$1.7 billion on fishing and diving activities on the region's artificial reefs. That study also estimated the annual use value of any new artificial reefs to be \$27 million.

These numbers are a strong incentive for the FWC to continue its artificial reef program and to incur costs to meet environmental standards beyond that of the cost of simple disposal by immediate sinking or exploitation of the vessel's value as scrap metal.

of the Gulf Stream to power the Southeast Florida metropolitan area, from Homestead to Jupiter," she said.

SNMERC's main focus is to develop and deploy a testing capability for industrial prototypes of hydrokinetic energy generators, devices that can turn the power of the Florida Current into electricity.

"This is the single most compelling need of the private sector," said Coley. "In the process, SNMREC is assessing and characterizing the potential of the resource itself and working closely with regulatory agencies to put in place the permits and licenses needed to realize this

potential."

SNMERC also stresses that technologies under development "must be environmentally friendly, commercially viable, and, above all, functional. At this stage, functionality and its realization in the framework of environmental stewardship are the first priorities."

"There are no open-ocean current testing centers at present," said Coley. "When the infrastructure is deployed, SNMREC will be the first."

Because the Florida Current is the most robust source of hydrokinetic energy in the world, it's likely that no other such centers will be developed sooner.

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Proposed Palm Beach County wind farm successfully jumps another hurdle

By DAN MILLOTT

The Palm Beach County Commission moved in late March to approve Florida's first wind farm on 12,900 acres east of Belle Glade.

The unanimous action by the commission followed a strong show of support for the project from officials in Lake Okeechobee communities and labor unions noting the number of jobs that will be created by the project.

St. Louis-based Wind Capital Group plans to construct the wind farm on agricultural land. The project calls for building a 114-turbine wind farm capable of

producing 200 megawatts of power. That amount of energy would be capable of servicing 60,000 homes.

The plan calls for the turbines to be placed a quarter of a mile apart. The base of each turbine would cover less than a tenth of an acre.

Some environmental groups, the Sierra Club among them, pleaded with the commission to delay a decision, urging more study on the environmental impact on migratory birds.

"We want to make sure the wind farm doesn't hurt endangered species in the area, including the Everglades kite," said Lisa Interlandi, executive director of the

Everglades Law Center.

Much of the concern about the project is tied to the ongoing Everglades restoration and the billions of dollars being spent to preserve and restore the famed River of Grass.

Interlandi said the commission's action was a conditional approval of a zoning change. She said the ELC had requested some conditions that the commissioners agreed to. Among them, the installation of bird-detecting radar that would be used anytime the turbines were operating. Such radar will enable the turbines to be stopped if they detect birds approaching.

Even with some stipulations accepted, Interlandi said the ELC still has some concerns about the project and will voice them when the project moves to the next step in the approval process.

The wind farm must pass muster with the U.S. Fish and Wildlife Service for its endangered species and wildlife permits. It also must be approved by the U.S. Army Corps of Engineers and Florida Department of Environmental Protection.

The ELC, Sierra Club and others note that the proposed wind farm location is in a major flyway for migratory birds.

The economic impact of the project was a moving force in getting commission approval. Commission Burt Aaronson said everyone is concerned about endangered species, but that another endangered species—people—are out of work.

The need for jobs in the Belle Glade-Pahokee area is characterized by an unemployment rate at near 40 percent, according to community officials.

According to Wind Capital, 250-300 jobs would be created during construction and 15-20 full-time permanent jobs would be available once the wind farm is operational.

Some in the wind industry field question whether the winds in the state are sufficient to produce the power predicted by Wind Capital. But Robin Saiz, the firm's project director, said they have been measuring wind in the Glades since December of 2009 and believe that it is of commercial grade.

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AWWA: Cost of repairing, expanding drinking water infrastructure could top \$1 trillion

Staff report

Massive amounts of money will have to be spent on repairing and replacing aging pipes and other water infrastructure, according to a new report by the American Water Works Association.

The report painted a grim picture of the enormous costs associated with making improvements to water systems in the next 25 years and the burden that ratepayers in large and small cities will face.

The AWWA estimated that the cost of repairing and expanding drinking water infrastructure will top a staggering \$1 trillion over the next quarter of a century.

The report, titled "Buried No Longer: Confronting America's Water Infrastructure Challenge," said the costs for improvements will be met mainly through higher water bills and local fees.

The impact on cities will depend on their size and geography, said the study,

FEDFILES
From Page 2

the numeric criteria themselves or address the environmental or indirect economic effects of implementing the criteria.

Environmental justice strategies. Under the aegis of the Council on Environmental Quality and the EPA, several federal agencies announced specific actions that will promote policies for environmental justice.

The U.S. Department of Transportation's Federal Transit Administration is promulgating guidelines to help state and local government grantees identify minority or low income populations that could be adversely affected by transit projects or transit decisions.

Within DOT, the Federal Highway Administration in collaboration with the National Highway Institute will revise a course on environmental justice and Title VI programs.

The U.S. Department of Labor will translate hazardous alerts and other educational materials into Spanish, Chinese and Vietnamese so that minority workers will understand how to avoid environmental hazards in the workplace.

The U.S. Department of Energy's Pueblo Project, based in Los Alamos, NM, will collaborate with four Indian tribal governments to install and operate pollution monitoring programs associated with the National Nuclear Security Administration.

Plus, the U.S. Department of Veterans Affairs is collaborating to provide green jobs and workforce development for minority veterans and low income communities.

Finally, the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, is working with local governments and agencies to apply

which looked at many factors, including timing and water main installation and life expectancy.

The report made it clear that many small communities will have the toughest job with meeting the expenses because they have fewer people to share the load.

"We haven't faced this kind of challenge where existing assets in the ground will have to be replaced on this scale," said AWWA spokesman Greg Kail. "It's definitely going to drive up the cost of the service."

Replacement needs account for about 54 percent of the national total with the balance due to population changes over that period.

The report estimated that the required investment nationally will double from about \$13 billion a year today to about \$30

AWWA
Continued on Page 16

health impact assessments.

These assessments may help evaluate the potential impacts that a policy or project may have on low income and minority communities.

One example is a study underway in Baltimore, MD, to evaluate the human health impact of a vacant property redevelopment program there.

The new policies and efforts are part of a much larger initiative by the Obama Administration in support of environmental justice. The federal agencies listed here joined several others that have already promulgated specific programs and goals for environmental justice.

Infrastructure rating system. The Institute for Sustainable Infrastructure in collaboration with the Zofnass Program for Sustainable Infrastructure at the Harvard University Graduate School of Design unveiled a new infrastructure rating system called Envision.

The system is designed to help policy makers evaluate the sustainability of infrastructure, set realistic national priorities and conduct a national discourse on infrastructure investment.

The system rates all types and sizes of civil infrastructure projects in terms of environmental, economic and community benefits.

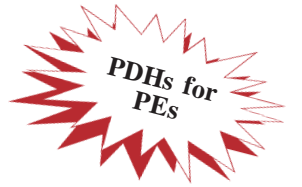
People news. Ben Scaggs was named as the director of the U.S. Environmental Protection Agency's Gulf of Mexico Program.

Scaggs will be responsible for overseeing a broad program designed to facilitate collaborative actions to protect, maintain and restore the health and productivity of the Gulf of Mexico in ways consistent with the economic well-being of the region.



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Directions to the conference center are available on the Kovens Conference Center web page at <http://kovens.fiu.edu/>.

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The registration fee for the 2012 FRC-South Conference is \$185. This fee includes full registration for the one-day conference, conference materials and flash drive, continental breakfast, beverage breaks and the luncheon.

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We encourage you to register early. Conference registration is limited to avoid overcrowding. Please note: Payment in full is required to confirm your registration. Cancellations received before April 9, 2012, will be refunded, less a \$50 service charge. No refunds will be made for cancellations received after that date. However, paid no-shows will receive a copy of the presentation materials upon request. Substitutions will be accepted at any time, preferably with advance notice.

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Technical Agenda

- 9:00 Welcome: Mike Eastman, *Florida Specifier*
Keynote Address:
John Barkett, Partner
Shook, Hardy & Bacon LLP, Miami
- 9:30 **ASTM E 1903-11 Phase II Environmental Site Assessments: Where, How and Why is it Relevant?**
Nick Albergo, PE, DEE, Principal
HSA Engineers & Scientists, Tampa
- 10:00 **Risk-Based Closure and Restrictive Covenants**
Craig Hurst, Senior Project Manager
Groundwater & Environmental Services Inc., Ft. Lauderdale
- 10:30 *Break*
- 11:00 **ADaPT Panel Discussion**
Panelists: **Andy Tittle**, Technical Project Manager
Advanced Environmental Labs, Tallahassee
Linda Hoffman, Senior Engineer
HSW Engineering, Tampa
Clark Moore, Environmental Specialist III (*Remote*)
FDEP Bureau of Solid & Hazardous Waste, Tallahassee
- 12:00 **Luncheon:** Sponsored by **Advanced Environmental Labs**
- 1:00 **Regulatory Panel Discussion**
Moderator: **Glenn MacGraw**, PG, Vice President
The FGS Group, Tallahassee
- Panelists: **Wilbur Mayorga**, PE, Chief, Pollution Remediation Section
Miami-Dade County Dept. of Env. Resources Mgt., Miami
David Vanlandingham, PE, Engineer IV
Broward County PPRAQD, Ft. Lauderdale
Paul Wierzbicki, PG, Waste Cleanup Supervisor
FDEP, Southeast District, West Palm Beach
- 2:30 *Break*
- 3:00 **Performance of Enhanced Anaerobic Dechlorination via Groundwater Circulation at a South Florida Strip Mall**
Brian Timmins, Director
ETEC LLC, Portland, OR
- 3:30 **Anatomy of a Pilot Study for Chemical Oxidation Coupled with Biostimulation in a Restricted Access Urban Setting**
Timothy Harman, PE, General Manager
Handex Consulting & Remediation - Southeast LLC, Delray Beach
- 4:00 **Copper Remediation in CERP Project Areas**
Barry Westmark, PE, Principal Engineer
Environmental Consulting & Technology Inc., Fort Lauderdale
- 4:30 **Sustained-Release Permanganate for Passive In-Situ Remediation of Organic Contamination**
Pamela J. Dugan, PhD, PG, Technical Development Manager
Carus Corp., Peru, IL
- 5:00 *Adjourn*

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Fort Myers project includes stormwater system

By PRAKASH GANDHI

Officials with the city of Fort Myers are hoping a new water filtration system will help clean up the Caloosahatchee River. The goal is to filter stormwater runoff that carries dirt, trash and chemicals into the river.

The Fort Myers City Council approved a riverfront project for \$5.275 million at a meeting in February.

The seven-month project is expected to be completed by September, said Don Paight, executive director of the Fort Myers Redevelopment Agency.

"This is a water detention basin that we hope will capture a lot of the stormwater runoff from the streets and parking lots," Paight said.

The runoff in the drainage basin of the Caloosahatchee is characterized by high levels of nitrogen, often from fertilizer, which causes algae blooms and fish kills.

The Florida Department of Environmental Protection wants nitrogen levels reduced by 23 percent and is working with Fort Myers, the city of Cape Coral, and Lee and Charlotte counties to develop reduction plans.

Fort Myers has installed low-tech basket inserts in downtown storm drains to collect trash. After rainwater is filtered by the baskets, it will enter new underground

tanks that will allow the heavier gravel and silt to sink to the bottom.

After these two steps, the water will flow into two detention basins. Those ponds will also serve as sediment pools that will settle out the finer particles of sand and dirt.

A shelf of wetland vegetation will be planted along one wall of the ponds to uptake excess nutrients such as phosphorus and nitrogen from fertilizer runoff.

"There are a lot of these projects out there," Paight said. "But what's unusual about this project is the fact that it is in an urban, downtown area. Not many cities will take 1.4 acres and create a water detention basin."

Downtown property owners are paying for the project. The city also received about \$1 million in state grants.

DEP has classified the Caloosahatchee River as an endangered waterbody. Paight said this project will definitely help to clean up the river.

AWWA

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billion annually by the 2040s.

Asked why the cost of improvements is so high, Kail said the issue is not one of neglect. "It's really an issue of mortality of pipes and growth," he said. "The reality is that water infrastructure is very capital intensive."

The numbers are even more alarming when one considers that they deal with only buried infrastructure. "The report does not look at the cost of building new water treatment plants," Kail said. "In some communities, water bills could triple to meet these needs."

Kail said AWWA is optimistic that the money will be found to pay for the improvements recommended in the report.

"The report makes it clear that doing nothing is not an option. If you don't properly address the problems, it gets more expensive," he said. "Water infrastructure is out of sight and out of mind. But when we deal with a situation where there is water system failure, we see the value of the service."

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