

# Florida Specifier

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## TBEP success 5

The Tampa Bay Estuary Program recently reported that it met all of its water quality and ecosystem improvement targets for last year.

## St. Pete waste-to-energy 6

St. Petersburg officials are embarking on a new project that they believe will have both economic and environmental benefits. City officials said they will save money by turning sewage into renewable energy.

## Oyster issue 7

Last year, the oystermen in Apalachicola Bay found 95 percent of their winter catch dead upon recovery. The Florida Fish and Wildlife Conservation Commission estimated the 2012 oyster harvest was reduced by 80 percent from previous years, prompting a gubernatorial request for a federal fisheries disaster declaration for Apalachicola Bay.

## Evidence of oil spill damage 8

A team of researchers from the University of South Florida is crafting a problematic image of the long-term effects of the Deepwater Horizon oil spill on deep-sea organisms in the Gulf of Mexico.

## Legislative summary 10

Environmental regulatory reform was expected to be a low priority in Tallahassee this year, but it turned out to be an active legislative session for environmental and water-related bills.

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## Got a story lead?

Got an idea for a story? Like to submit a column for consideration? Fire away. And don't forget to fill us in on your organization's new people and programs, projects and technologies—anything of interest to environmental professionals in the state. Send to P.O. Box 2175, Goldenrod, FL 32733. Call us at (407) 671-7777; fax us at (407) 671-7757, or email mreast@enviro-net.com.

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## State officials move to reform the process of cleaning up contaminated petroleum sites

By ROY LAUGHLIN

In the final days of its 2013 session, the Florida Legislature passed two bills instructing the state Department of Environmental Protection to substantially reform the petroleum

cleanup program's contracting and procurement requirements, substantially expand its project oversight, to make these changes by the end of 2013, and to obligate up to \$50 million for contracts and work orders by July 1 to ensure that cleanup industry profession-

als stay afloat financially during the transition.

The legislation stipulated some specific procedural changes while instructing the bureau to formulate other implementation rules and to garner approval from the Legislative Budget Commission.

The establishment of a new approved contractors list will be a major change affecting Florida's remediation industry professionals.

In its early planning stages, DEP met with its regulatory counterparts from the state of Texas. Some cleanup contractors believe that the Texas program model will be adopted by Florida.

Texas' list of approved contractors is quite small, limited to several dozen firms. Since 1994, Florida has had a two-tier system consisting of state contractors, currently numbering 11 firms, and prime contractors numbering 253 firms, according to Jorge Caspary, director of the DEP's Division of Waste Management.

Contractors fear that the Texas model is being adopted to restrict the number of firms involved in the program. But DEP officials unwaveringly insist that decreasing the number of approved contractors is not their intention and will not happen.

"We will increase the number of contractors who'll be procured by state contract," said Caspary in an interview with the *Florida Specifier*. He further explained that the Texas program is reaching its sunset phase.

"Florida's program is evolving," he



Staff photo

The state's petroleum cleanup program is undergoing a significant revamping this year as DEP officials rewrite program rules. Shown above: An underground tank is pulled at a contaminated gasoline station site. See story above.

## Proposed Miami-to-Orlando railway system starting to roll

By BLANCHE HARDY, PG

All Aboard Florida, the passenger train proposed to run from Miami to Orlando, recently selected AMEC Environmental and Infrastructure to oversee design, planning, environmental compliance and permitting for the 230-mile passenger railway system.

It would be the country's first contemporary privately owned, operated and maintained intercity passenger rail system.

AAF is a subsidiary of Florida East Coast Industries Inc., a commercial real estate and infrastructure company that dates back to the days of founder Henry Flagler.

The train will run several times a day between Miami and Orlando, and will include stops at intermediate stations in Fort Lauderdale and West Palm Beach.

No state or local taxes are being sought to support the railroad's construction or operation, but AAF is seeking a federal loan to assist with track work and other capital expenses.

The U.S. Department of Transportation's Federal Railroad Administration has issued a finding of no significant impact for the portion of the project running on existing Florida East Coast railway track from West Palm Beach to Miami.

They are currently pursuing an environmental impact statement and record of decision for the remainder of the run.

FRA Spokesman Mike England said the agency anticipates issuing its decision in mid-2014.

AAF has the existing right to develop passenger rail service within the

privately owned and currently freight-operational 66 miles of track between Miami and West Palm Beach, as well

**ALL ABOARD**  
Continued on Page 12

**CLEANUP**  
Continued on Page 14

## Meeker resigns from SFWMD

By SUSAN TELFORD

South Florida Water Management District Executive Director Melissa Meeker resigned from the 16-county water district late last month.

With "Moving Forward" scribed in the subject line, Meeker's single page e-mail addressed to Herschel Vinyard, secretary of the Florida Department of Environmental Protection, Rachel Cone, director of strategic planning in the governor's office and district staff, Meeker announced that she had given her notice of resignation to Daniel O'Keefe, the new chairman of the district's governing board.

Her e-mail gave no specific reason for her resignation or a departure date. However, Meeker did state, "I'm glad it was me who was here during this very challenging period for the agency. Although it wasn't easy, I am proud of the way staff rallied in the face of adversity, focused on solutions and refused to yield to cynicism. Wherever I go, I will always carry the lesson of your professionalism and dedication."

Meeker was appointed to the SFWMD's governing board in 2007 by then Gov. Charlie Crist and handpicked to be the executive director by Gov. Rick Scott in June 2011.

In her two years as head of the district, Meeker drastically cut the district's

\$1 billion budget, laid off more than 300 employees and slashed benefits and salaries.

Alleged complaints of cronyism, no-interview hires, no-bid leases, contracts to erect billboards on district lands, and conflicts of interest regarding top staff and owners of businesses regulated by the district plagued Meeker during her tenure as head of the district.

An internal investigation cleared Meeker of any wrongdoing regarding awarding a billboard contract to a former business partner.

In January, Meeker negotiated no-bid 30-year agricultural land leases with major farming companies, despite environmentalists' and a water district official's concerns that no public notice was given.

**MEEKER**  
Continued on Page 3

## Correction, clarification

In our Page 6 story in May's issue, we misspelled the name of NAS Jacksonville Environmental Director Kevin Gartland. In addition, we failed to include mention of NAS Jacksonville as the organizer of the charter signing ceremony. We regret the error and omission.



# Central Florida planning council gets federal brownfield funding

## Staff report

A brownfield property at the southeast corner of Lake Parker in Lakeland is the recipient of a U.S. Environmental Protection Agency brownfield program planning grant.

The EPA will provide the Central Florida Regional Planning Council with about \$198,000 to develop an area-wide plan for its revitalization.

Investigations funded by the EPA are expected to inventory existing conditions, and identify priorities and resources needed to bring the plan to fruition.

Local partners include the city of Lakeland, Polk County, the Florida Department of Environmental Protection, the Combee Area Revitalization Effort, and other interested community groups.

The study is funded under the EPA's area-wide planning grant program, a component of the agency's larger brownfields program.

Initiated in 2010, area-wide planning grants of up to \$200,000 are intended to assist communities that have a cluster of brownfield sites that adversely influence the economy and environmental quality of the community.

**Phosphate AEIS released.** In April, the U.S. Army Corps of Engineers released its

final area-wide environmental impact statement for phosphate mining in Central Florida.

The draft report, released last summer, garnered more than 4,000 comments. The corps, in announcing the final draft, said that comments addressed primarily NEPA compliance, surface and groundwater resources, and ecological concerns.

John Fellows, the report's lead author, noted that where appropriate, input received during the comment period resulted in "changes in factual corrections."

Overall, the AIES' conclusions seem little changed. Of the five resource categories the report characterized and analyzed—surface water resources, groundwater resources, surface water quality, ecological resources and economic resources—only economic resources were considered not to be significantly influenced by phosphate mining.

For the other four resource categories, the report characterized significant potential cumulative effects that could be reduced through mitigation.

Like the draft report, the release of the final report is followed by a 30-day public review period ending June 3. Copies of the report are available on-line at [www.saj.usace.army.mil](http://www.saj.usace.army.mil).

**Florida joins alternative air quality organization.** The Florida Department of Environmental Protection joined 16 other state agencies when it joined the Association of Air Pollution Control Agencies.

The new organization was formed as an alternative to the National Association of Clean Air Agencies. That organization, formed over 30 years ago, is composed of representatives of state and local air pollution control agencies in 45 states and territories and 116 major metropolitan areas across the country.

Florida's former membership to NACAA cost the state \$55,011 per year but was covered by a federal grant, according to Patrick Gillespie, press secretary at DEP.

AAPCA and NACAA seem to have similar stated goals: the exchange of ideas and information, professional advancement for its members, and identification and implementation of best management practices.

Battelle received a two-year contract from AAPCA to organize and run the new organization. Karen Riggs will serve as its interim executive director.

The 17 member states are Alabama, Florida, Indiana, Kentucky, Louisiana, Mississippi, Nebraska, New Mexico, Nevada, North Dakota, Ohio, Pennsylvania, Tennessee, Texas, Virginia, West Virginia and Wyoming.

The major difference between the two organizations seems to be that AAPCA will be "consensus driven." However, exactly what is meant by "consensus driven" is ambiguous.

An article about AAPCA said that the new group will form a board including representatives of all states that join the association.

According to its web site, NACAA has a board consisting of only 15 members that include the officers.

With 45 states represented among NAACA's members, its board is too small to give each state a seat.

**Water pollution from combustion power plants.** Control of air pollutants from coal-fired power plants is a familiar theme of environmental policy during the Obama administration.

The EPA's former administrator, Lisa P. Jackson, made it a focus of her tenure.

That coal-fired power plants are also responsible for about half of the toxic pollutants discharged into rivers, lakes and streams from permitted industrial facilities in the country has been a second-tier concern.

In mid-April, EPA announced plans to develop a range of options to help reduce dangerous pollutants, including mercury, arsenic, lead and selenium from coal-burning power plants, from entering America's waterways.

The options that EPA mentions will be part of a final rule whose implementation could depend on how waste streams should be treated—or if they should even be treated at all.

Of the 1200 steam electric power plants in the U.S., only 500 of them—those that generate more than 500 megawatts—would be subject to the new rule. The majority of coal-powered electricity generating plants would incur no additional costs under the proposed new standards.

The EPA proposed four preferred options whose choice would be influenced by the number of waste streams covered. Those waste streams could include fly ash handling, the treatment of air pollution control waste and bottom ash, the size of the units controlled, and the stringency required to reduce contaminants and pollutants.

The rules, according to the agency, could reduce pollutant discharges by 470 million to 2.62 billion pounds annually. Water use could be reduced by 50-103 billion gallons per year.

Coal-burning plants subject to the rule will be expected to implement technology already in use at other plants. The requirements will be phased in between 2017-2022. The agency has considerable leverage to modify schedules, if necessary.

EPA also said that these rules, issued under the Clean Water Act, will be aligned with another set of rules yet to be proposed for the handling of coal combustion residues, also referred to as coal ash, which will be issued under the Resource Conservation and Recovery Act.

The proposed rule will update standards in place since 1982. The EPA has proposed this new rule to meet the requirements of a consent decree.

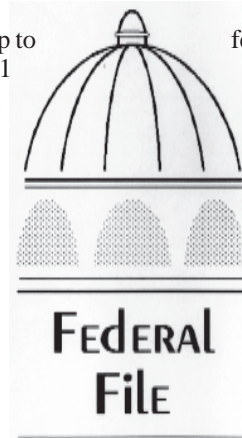
The 60-day comment period will open after publication in the Federal Register. Under the terms of the consent decree, the EPA must take final action by May 22, 2014.

**Florida ranks low in Green Power Partnership.** Florida may call itself "the sunshine state," but it's rankings in this year's EPA Green Power Partnership rankings suggest that's little more than a name. No state university or college in the state was in the top 10 of the rankings.

Florida State University and the University of Miami, which tied for 29th place, were the highest ranking Florida schools.

The EPA program includes 11 categories of rankings. No Florida institution or business was recognized.

The absence of state incentives to use green power, incentives generally absent in southern states, could be the most significant factor holding Florida institutions back from higher tier standing in EPA's Green Power Partnership.



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## Tim Preston now Tallahassee Manager!

AEL is proud to announce that Tim Preston has joined us as our Tallahassee Lab Manager. Tim has over 20 years experience in running lab operations and in project management. He is well known and respected for his industry knowledge and his deep commitment to customer service.

**Welcome aboard, Tim!**

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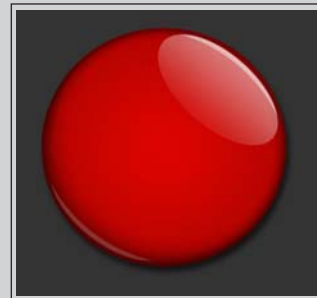
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## Change to brownfield law will impact tax incentives

### Staff report

A bill passed during the 2013 Florida legislative session will prevent businesses from receiving tax breaks due to "perceived" pollution on their properties.

In recent years, Florida companies have received as much as \$11 million in brownfield economic development tax breaks, sometimes when there is no actual contamination present.

The initial law was vaguely written and did not require actual contamination—only the perception of it.

The bill, Senate Bill 406, requires companies receiving those tax incentives to be on or next to property where a pollution cleanup agreement with local government is in place.

The legislation also requires state economists to conduct more rigorous studies to see what benefits the business tax incentives create.

Florida brownfield rules were established in 1997 as a way to cleanup and redevelop polluted sites and areas.

Companies that set up shop or expand in areas designated as brownfields can receive up to \$2,500 in tax refunds per job.

Local governments in Florida have designated 231,537 acres as brownfields so far. Cleanup agreements are in place for just 3,926 acres.

Businesses already approved for tax refunds and those that have applications in before the bill becomes law will still receive them.

**Sebring contamination assessed.** The Sebring City Council has approved spending nearly \$27,000 to drill monitoring wells inside the former Park Street Power Station to assess the level of contamination present.

Previous testing outside the former power-generating plant found contamination of groundwater.

Earlier efforts to drill a test well inside the plant building were not successful.

Officials said additional wells may be needed if results from lab analyses show contamination beyond permissible state levels.

The state, concerned that contamination will eventually impact private wells or pollute nearby Lake Jackson, is requiring the cleanup.

The power plant began supplying Sebring with electricity decades ago.

**PSJ natural gas plant.** Construction of a next-generation power plant in Port St. John by Florida Power & Light Co. has been completed more than a month ahead of schedule and \$140 million under budget.

FPL says the new natural gas facility in Brevard County is expected to reduce the rate of carbon dioxide emissions by 50 percent.

The facility has the capacity to produce twice the electricity of the previous plant, enough to power 250,000 homes and businesses. The project was completed for \$900 million.

Company officials said they were able

### **MEEKER** From Page 1

More recently, she negotiated a deal for the district to buy Mecca Farms from the county for \$26 million. The site, a vacant 1,900-acre property near The Acreage, has an appraised land value of \$14.8 million to \$22.5 million.

The board was not told about the appraised value or a state policy that urges the districts not to pay more than 90 percent of an appraised value for land. The deal was recently approved by the Palm Beach County Commission and needs district approval for it to move forward.

In a statement released by DEP, Vinyard said, "Melissa's intellect and leadership played a key role in Gov. Scott's historic progress in Everglades restoration. Her focus on the district's mission of flood control, water quality, water quantity and natural resource protection was unsurpassed."

to reduce the cost of the plant due to the timing of steel purchases as well as improved construction productivity.

The plant replaced a 45-year-old facility that was demolished in August of 2010.

**Brownfield award.** Michael R. Goldstein, managing partner of The Goldstein Environmental Law Firm, received a prestigious brownfields leadership award by the National Association of Local Government Environmental Professionals. Goldstein was recognized for his work in public/private partnerships.

Goldstein has been practicing environmental law for 21 years and is known for his pioneering work in environmental redevelopment.

He has worked on more than 75 brownfield projects since enactment of the state's brownfields legislation in 1997.

Among Goldstein's more notable South Florida brownfields efforts are representing the city of Miami in negotiations with the Florida Marlins for cleanup of the Orange Bowl and the redevelopment of the Marlins Stadium.

He also served as the city's environmental counsel in negotiations with the Miami Museum of Science, Miami Art Museum and Miami-Dade County for cleanup of the Bicentennial Park and its redevelopment as Museum Park.

**Champion of change.** The White House honored a Broward County scientist as a "champion of change."

Jennifer Jurado, who heads the Broward County Natural Resources Planning and Management Division, was among 12 people across the country identified by the White House as "Champions of Change" for preparing their communities for the consequences of climate change.

Jurado helped create the four-county Regional Climate Change Compact, which has worked to prepare Broward, Miami-Dade, Palm Beach and Monroe counties for rising seas, extreme weather and other problems associated with climate change.

Jurado said she hopes Broward County and the other counties in the partnership will serve as a models for other coastal communities in Florida and around the country.

## Florida Notes



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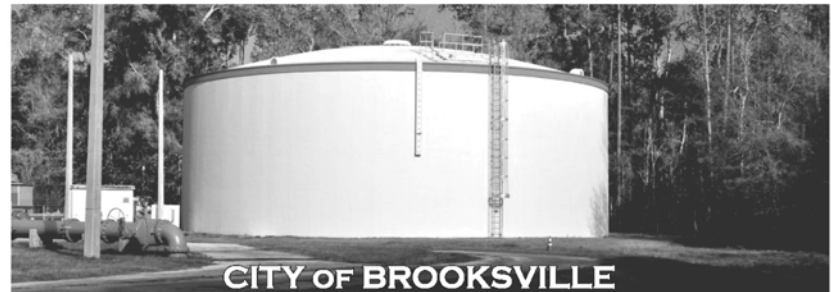
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# ERC postpones setting toxicity limits for pollutants in state waters

## Staff report

The Environmental Regulation Commission postponed the adoption of toxicity limits for more than 30 known water pollutants.

The Florida Department of Environmental Protection had proposed adding 34 toxic chemicals to the existing list of 36 pollutants often found in pesticides, petroleum, plastics and industrial compounds, all of which have the potential to show up in Florida's rivers, lakes and streams.

Environmental activists said changes

proposed by the state would weaken the current level of protection of Florida's waters from toxic chemicals including benzene, chlordane, PCBs, chloroform, carbon tetrachloride, bromoform and tetrachloroethene.

Many of these toxins would be regulated in state for the first time, but at levels that are significantly less stringent than those recommended by the U.S. Environmental Protection Agency.

DEP officials said that the new pollution limits would be more stringent than those set by the EPA.

However, state officials said that while the proposed criteria are protective of the public health and state waterways, the commission decided to continue the hearing on toxicity levels until next fall, based on the complexity of the proposed rules.

**Frostproof stormwater project.** Delayed by the reorganization of the Southwest Florida Water Management District's legal department, the construction of a stormwater filtration project in Frostproof is finally back on track.

The district's legal department—entirely new after the reorg—made it a priority to review all existing agency documents including a 2011 agreement with the city of Frostproof to build a stormwater filtration pond on Lake Clinch.

The review stalled the project between its design and implementation phases.

The review started before Michael Peck, PE, staff engineer with Swiftmud, had time to put the work out to bid. Peck finished the design and permitting, and originally planned to have the work completed by October 2012.

While waiting for the legal review, the agreement between the Frostproof City Council and Swiftmud regarding costs and project details was set to expire. Peck approached the city council and requested an agreement renewal, just prior to the expiration date of April 1.

Council members unanimously approved the renewal request.

The joint venture consists of building an embankment on city-owned land on the west end of Wall Street to form a dry retention pond for stormwater runoff and filtration before it enters Lake Clinch.

Swiftmud will pay 75 percent of the cost, estimated to be \$45,000 to \$60,000, while the city will pay the remaining \$15,000 and will maintain the retention area in perpetuity.

**Margate nixes reuse.** Based on new population projections, Margate city commissioners decided to shelve a wastewater reuse project.

Close to \$6 million of taxpayer dollars was accrued by a rate increase from 2009 to 2012 for building the \$9-million plant, which was approved by the city in 2007.

The original intent of the reuse project was to free up drinking water reserves by treating wastewater, and then selling the wastewater to area golf courses for irrigation use.

**Parker wastewater upgrade.** The Parker city council recently approved a budget amendment of \$469,635 to the general fund to overhaul its ailing sewage treatment plant.

Described as having pipes that are paper-thin and leak like a sieve when under pressure, the much-needed rehabilitation will be funded through a community redevelopment block grant.

The budget amendment was required

by the Florida Department of Economic Opportunity to get the work in motion with the necessary funding.

**Restoration on hold.** The Palm

Beach Town Council's Shore Protection Board unanimously recommended putting the Reach 8 beach restoration on hold until they receive an environmental impact study from their coastal consultant.

The town council is waiting for recommendations regarding the entire coastal management program from the Woods Hole Group before proceeding further.

The U.S. Army Corps of Engineers required the town to conduct the EIS before it will decide whether to issue a federal environmental permit for a beach fill for Reach 8, which extends from the Lake Worth Pier to the southern town limit.

The board recommended filling the beach north of the pier, allowing the sand to feed the eroded shore to the south, providing shore protection for residential buildings.

The board considered the direct beach fill approach because the permits are easier to obtain than the state and federal environmental permits for Reach 8.

**Carrollwood sewage plant upgrade.** Hillsborough County's oldest sewage treatment plant is getting a state-mandated \$20-million upgrade.

The Dale Mabry Advanced Wastewater Treatment Plant, located on the edge of Carrollwood Village, will have the upgrades done over time with a number of projects in place to address immediate needs.

Mandated under a 2011 agreement between the county and the Florida Department of Environmental Protection, the pact addresses necessary repairs and upgrades that will keep the facility in good operating order.

Built by Carrollwood Village developers over 30 years ago, the package plant was originally designed to process one million gallons of raw sewage daily.

The plant was expanded during the 1980s to process up to 4 mgd, and again in the 1990s to handle its current capacity of 6 mgd.

George Cassidy, operations director of Hillsborough County Utilities, said that the much needed improvements will keep the plant in compliance with current regulations.

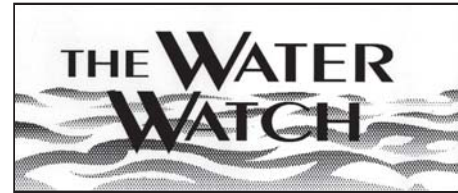
**Waldo water meters.** The Suwannee River Water Management District awarded a grant of \$76,836 to the city of Waldo to replace faulty water meters.

The grant was from the district's Local Regional Initiative Valuing Environmental Resources cost-share program. The city's application was one of only 14 approved projects out of the 43 applications submitted.

The city will match the district funds, bringing the projected total of the upgrades to \$153,672.

**Barnett to focus on 'Glades.** Ernie Barnett was named assistant executive director for Everglades and water resources for the South Florida Water Management District. He will oversee the monitoring of water quality and Everglades restoration efforts.

**WATCH**  
Continued on Page 5





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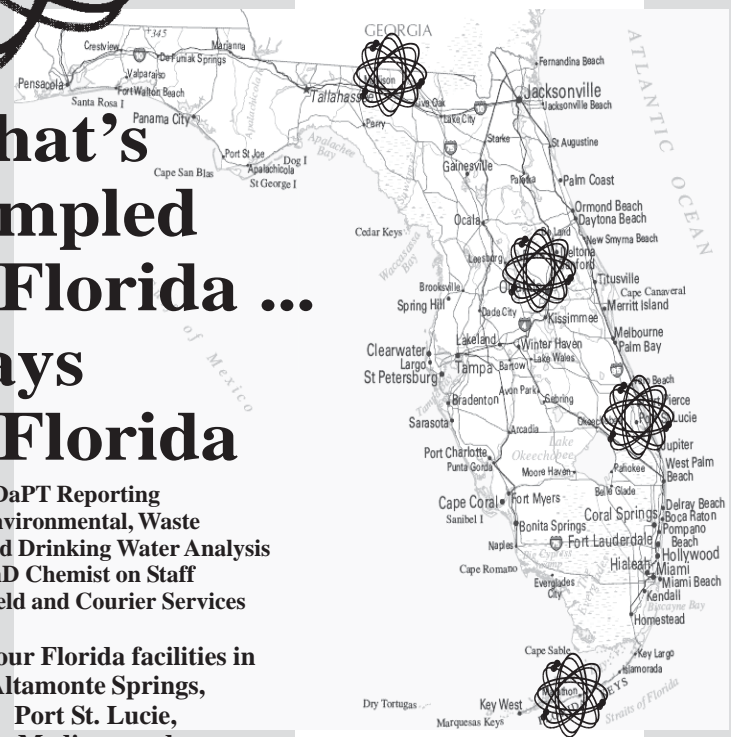
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# Tampa Bay Estuary Program reports progress with meeting water quality targets

By PRAKASH GANDHI

Officials working to keep harmful pollutants from entering the Tampa Bay Estuary appear to be winning the battle.

The Tampa Bay Estuary Program recently reported that the state's largest estuary met all of its water quality targets last year—for only the fourth time since its inception.

Since 1974, estuary program scientists have assessed water quality in the four sections of the bay to determine whether the water is clean enough to promote the natural recovery of seagrasses that are vital to the bay's health.

Seagrasses, which generally grow in waters less than six feet deep, are an important barometer of the bay's health.

Thirty years ago, there were only 22,000 acres of seagrass remaining in the bay. But by 2011, efforts by local governments to reduce pollution flowing into the bay had allowed the spread of seagrass to nearly 33,000 acres of the bay.

To help track the seagrass recovery, the program annually compares water quality to established targets in the bay and reports the results through a report card which uses a red, green and yellow color system to assess overall water quality in the bay.

"Green" means the bay segment is meeting water quality targets.

The 2012 analysis shows green across the board, meaning that water quality in all four bay segments—Hillsborough Bay, Old Tampa Bay, Middle Tampa Bay and Lower Tampa Bay—is good enough to foster con-

tinued recovery of underwater seagrasses.

Ed Sherwood, senior scientist with TBEP, said that every year, officials assess water quality and measure algae abundance, comparing the results to the established targets.

Sherwood said the recent results are encouraging.

"It is good news and it is translating into more seagrasses in the bay," he said. "We are now at levels not seen since the 1950s. We have seen steady improvements in water quality since the 1980s."

There has been a reduction of both point and non-point sources of pollution into Tampa Bay over the years, Sherwood said.

"Initially, these improvements came from upgrades to the wastewater treatment plants in the early 1980s," he said. "But we have also seen reductions from other sources."

"Our focus has been on reducing non-point source pollution in the watershed. This latest report shows the large effort within Tampa Bay to reduce nitrogen loads from domestic wastewater treatment plants and stormwater runoff."

The Tampa Bay Estuary Program was created by Congress in 1990 to help the community protect and restore Florida's largest open-water estuary. It has been designated as an estuary of "national significance" in a region of more than 2.3 million people.

After decades of environmental decline, Tampa Bay has made an impressive comeback in recent years with improvements in water quality, seagrass coverage, and fish

and wildlife populations.

A series of large algae blooms plagued Old Tampa Bay in recent summers. The program is conducting a comprehensive, large-scale research effort to identify causes and potential remedies.

More information about the bay's overall health is expected this spring when seagrass surveys conducted by the Southwest Florida Water Management District are released.

The Tampa Bay Nitrogen Management Consortium, an alliance of local governments and key industries bordering the bay, has collectively invested more than \$500 million in projects to reduce nitrogen pollution since the 1990s.

In addition, several communities have adopted strict limits on the amount and type of fertilizer that can be applied to area lawns to prevent summer rains from washing fertilizer residues into the bay.

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## Duke report notes dip in CO2 emissions

Staff report

Duke Energy, the parent company of St. Petersburg-based Progress Energy, released its annual sustainability report covering its total service area. This is the seventh sustainability report issued by the company, but the first since Duke merged with Progress Energy last July.

Randy Wheelless, a spokesman for Duke Energy, said a surprising element in the report was the big drop in CO2 emissions generated by Duke Energy's power-producing facilities nationwide. He said part of that decline can be attributed to the upgrading of the utility's coal-fired power plants.

By the end of 2013, the company will retire 3,400 megawatts of older coal-fired units. That amount is expected to grow to 6,300 megawatts over the next few years.

The sustainability report said the investment in new and upgraded power plants has also contributed to a reduction of sulfur dioxide emissions by 83 percent and nitrogen oxides by 64 percent since 2005.

**WATCH**  
From Page 4

Temperince Morgan replaced Barnett as the director of the district's Office of Everglades Policy & Coordination Division.

**Farrell to lead reuse group.** Mark Farrell, a principal with Water Resource Associates in Tampa, was elected president of the Florida Reuse Association in April. Farrell formerly served as the group's vice president. Local Regional Initiative Valuing Environmental Resources. The association strives to develop new and better methods to reuse wastewater and augment water supplies.

**Tucker joins SRP.** The Suwannee River Partnership hired Scott Tucker for the position of conservation technician to assist agricultural producers in Gilchrist, Alachua, Columbia, Union and Bradford counties in implementing best management practices for water conservation and water quality protection.

Prior to joining SRP, Tucker was employed by the U.S. Department of Agricultural Farm Service Agency where he worked with crop insurance adjustments, and surveyed crops to review damages and

Wheeless also cited Duke Energy's commitment to renewable energy. "I think it's interesting how renewables, either our own or those purchased, will amount to 6,000 megawatts by 2020." That translates into Duke doubling its use of renewables over the next seven years.

As an indicator of the company's commitment to renewables, Wheelless noted that Duke spent \$2.5 billion on wind and solar energy over the last six years.

In Florida, Wheelless said that Progress Energy has been involved in biomass as a renewable source of energy. "We purchase 175 megawatts of electricity in Florida produced from biomass sources as well as landfill gas and municipal waste."

Duke Energy has 28,000 employees system-wide. The report includes mention of the company's aging work force and the prospect of future retirements—a clear signal of a need for more trained people.

"Fifty-seven percent of Duke's workforce are baby boomers," he said. "So we have to bring in younger people."

establish production yields.

In his position as conservation technician, he will focus on the Santa Fe Basin to assist producers in attaining water quality improvements established in the Santa Fe Basin Management Plan.

**SRWMD adds staff.** Engineering specialist Darshan Shah and environmental scientist Darlene Saindon joined the Water Resources Division of the Suwannee River Water Management District this spring. Prior to joining the district, Shah worked with the U.S. Agriculture Natural Resources Conservation as an engineering intern where he designed and implemented various conservation practices.

Saindon most recently worked as a biological scientist at the University of Florida, where she was lab manager and field coordinator for several research projects regarding water quality and submerged aquatic vegetation along the Gulf Coast.

In addition, Alejandra Rodriguez joined the district as an engineer in their Resource Management Division.

She will be responsible for reviewing environmental resource permit applications, conducting as-built inspections on permitted systems, and evaluating compliance and enforcement issues.

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# Federal Aviation Administration to lead EIS for Space Florida launch facility

By ROY LAUGHLIN

In late April, the National Aeronautics and Space Administration agreed to allow the preparation of an environmental impact statement to move forward for several hundred acres of land in Volusia County—a first step for Space Florida's efforts to acquire the property for its own vertical launch facility.

As the state's aerospace economic development agency, Space Florida hopes to build and operate a rocket launch facility that private companies can lease for commercial launches.

The NASA property of most interest is a 150-acre site in southern Volusia County, formerly a community named Shiloh. The land is currently administered by the National Park Service.

The proposed Space Florida launch facility will include storage for liquid oxygen and highly refined kerosene, a launch pad for vertical launches and infrastructure associated with those functions. Space Florida intends to eventually build two launch pads.

If Space Florida can move forward with the facility, it would be at least four years before the first launch.

The agency would also need a larger off-site processing facility that would employ many more people, and would be the

location where missiles would be fabricated, their payloads managed and administrative functions focused.

The EIS for this project is notable because the Federal Aviation Administration will be in charge, although Space Florida will cover its costs.

The EIS will consider the usual set of environmental constraints involving natural resources, endangered species and other environmental factors and will address requirements germane only to rocket launches.

Dale Ketcham, director of the Spaceport Research & Technology Institute, said that few other locations that meet the requirements for such a facility exist on the U.S.' Atlantic seaboard.

Fishing and birding groups were quick to express opposition and reservations regarding the plan because of feared damage to wildlife and the desire not to have the area closed to the public during the launches.

Ketcham said that if Space Florida were successful with returning commercial space launches to Florida, the private launch complex would conduct 12-15 launches per year, suggesting closures at least once each month.

Space Florida's quest to build a commercial launch facility may be a long shot at this point. The EIS will not be completed

and available for public comment until the end of 2013. Under the most optimistic scenario, a launch facility will not be operational for four more years.

Space Florida faces competition from the European Space Agency, the established commercial payload launcher, and from space agencies in Russia, China and India.

In the U.S., Texas, with a designated

site near Brownsville, is considered well ahead of Florida in both preparation and preference. Georgia is also proposing a commercial rocket launch facility near its coast.

The FAA's EIS will evaluate all proposed sites with a consistent set of safety and environmental criteria, providing Space Florida with a level playing field in the launch facility competition.

## St. Pete officials propose waste-to-energy system at treatment plant

By PRAKASH GANDHI

Officials with the city of St. Petersburg are embarking on a new project that they believe will have both economic and environmental benefits. City officials said they will save money by turning sewage into renewable energy.

The energy could be used to power the city's water treatment plant or it could be converted into natural gas to fuel service vehicles.

The project took a major step forward earlier this year when city leaders approved a \$2.9 million contract with a consulting firm to design a system to convert methane gas from sewage into energy at a city wastewater treatment plant.

St. Petersburg officials said that wastewater solids will be processed at the facility.

Officials expect to see several benefits from the project. Maintenance and equipment costs would be lowered at other plants and the city's diesel usage would be reduced by 1,600 gallons a day.

The proposed project is expected to save the city about \$30 million over 20 years, said Thomas Gibson, the city's engineering and capital improvements director.

"We are going to save a ton of money on energy costs," Gibson said. "We will make electrical power from the methane that we produce and will save a lot of money on fuel."

City officials said that under the proposal, they will pipe sludge from their two other wastewater treatment plants to the plant on 54th Avenue. New anaerobic digester tanks will process it there. The tanks will store the methane byproduct that can be converted to energy.

St. Pete has been a leader in recycling efforts, especially with construction debris and yard wastes. The city spends \$1.1 million to collect the waste, then grind and transport the mulch to farms in Manatee County.

Workers also transport about 36,000 tons of treated sewage each year to Polk County to be used as fertilizer.

The biosolids effort has its benefits, said city leaders, because it relieves some pressure on city landfills. But since the waste is trucked as far as 80 miles away, transportation costs are high. The city spends about \$2.6 million each year hauling the waste.

The new renewable energy project will also help cut costs, said Gibson.

"The city will not only reduce its costs, but also generate renewable energy and eliminate the release of methane gas," he said.

The energy system at the 54th Avenue plant is expected to take as much as 15 months to design. Construction could take an additional two years.

The U.S. Environmental Protection Agency estimates that more than eight million tons of sewage biosolids are generated each year by publicly-owned wastewater treatment plants.

## Complaint against Avon Park utilities rejected

Officials with the American Federation of State, County and Municipal Employees union filed a complaint with state environmental regulators over the city of Avon Park's drinking water system.

The complaint alleged that the system doesn't have enough qualified personnel to run the water plant safely and claimed officials are trying to save money by not answering alarms.

City officials disputed the claims and said they have spent \$900,000 to upgrade equipment at the plant.

The Florida Department of Environmental Protection dismissed the complaint after finding no ongoing violations.

The city said it reduced the level of staffing because of improvements in technology that have made operations more efficient.

Two years ago, Avon Park received an excellence award for its water treatment plant operations and was voted as the city having the best tasting water in the state.



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This fall, the Annual Florida Remediation Conference, now in its 19th year, will again focus on the issue of soil and groundwater contamination cleanup in Florida's unique physical and regulatory environment.

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All participants will have a chance to learn about emerging treatment technologies and support services available for effective cleanup projects, and how they're being put to the task in the field.

We are now identifying sessions topics for presentation and are asking for abstracts a variety of topics: green remediation, risk assessment/RBCA, bioremediation, natural attenuation, emerging technologies, mixed waste challenges, site assessment technologies and methods, field sampling, site stabilization, combined strategies, vapor intrusion, regulatory policy and initiatives and cleanup of sites and surface water contaminated with petroleum, PCBs, chlorinated solvents, arsenic and heavy metals, pesticides and other contaminants.

We are again looking for talks on proven technologies with real-world applicability to Florida and appreciate data-heavy presentations and "roll-up-the-sleeve" approaches.

### Submission Instructions

We have started reviewing subject matter to be included on the 2013 FRC agenda. If you are interested in being a part of this year's conference, submit an abstract of approximately 250 words by July 15, 2013. FRC presentations are strictly limited to 25 minutes in length. Mail, fax or e-mail abstracts to:

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### Questions?

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arsenic, lead and heavy metals, pesticides and other contaminants  
What worked—what didn't?



# Recovery team studies reasons for Apalachicola Bay oyster harvest decline

By **BLANCHE HARDY, PG**

The 2011 Florida oyster season yielded 2.6 million pounds valued at over \$7 million and 88 percent of that catch came from the Apalachicola Bay area where oysters are a key source of income.

But last year, the oystermen in Apalachicola Bay found 95 percent of their winter catch dead upon recovery.

The Florida Fish and Wildlife Conservation Commission estimated the 2012 oyster harvest was reduced by 80 percent from previous years, prompting a gubernatorial request for a federal fisheries disaster declaration for Apalachicola Bay in September.

The swiftness and magnitude of the oyster population crash suggested environmental stress rather than overfishing.

The Florida Oyster Recovery Team, a collaboration of experts from the University of Florida's Institute of Food and Agricultural Sciences and Florida Sea Grant, came together to look closely at the oyster population decline, to consider ways to help the populations recover, and to find solutions for social and economic impacts resulting from the decline.

The recovery team delivered its assessment of the 2012 oyster fishery collapse in "Apalachicola Bay: Oyster Situation Report," released in late April. The report proposes continued monitoring, management and restoration, research, and outreach and education.

"It is critical that the state continue to monitor the status of the oyster population so we can determine its overall status and health, and assess the degree to which it is recovering over time," said Karl Havens, PhD, director of the Florida Sea Grant College Program and recovery team leader. "Right now, the state only surveys oysters in the middle section of the bay. This needs to be expanded to include the entire bay region."

Although pollutants released as a result of the 2010 Deepwater Horizon oil spill

were considered a potential source of oyster decline, no supporting evidence was noted for petroleum-related contamination in the seafood species tested.

The recovery team found that the exceptional drought conditions experienced over the last three years in the Apalachicola-Chattahoochee-Flint River Basin had significantly impacted Apalachicola River discharge levels.

The lack of freshwater discharge from the river system combined with the lack of local rainfall resulting in high salinity levels within the bay in 2012. Lack of fresh water also meant an accompanying lack of nutrients important to oyster, shrimp, fish and other marine organisms.

To maintain oyster populations, new oysters have to be "recruited" to established oyster bars. Oysters spawn, eggs are fertilized and the larvae attach themselves to the substrate, usually comprised of older oyster shells.

To assure that sufficient recruitment occurs to preserve future harvests, only oysters greater than three inches are legally harvestable. Without recruitment, oyster populations might cease to exist in as little as three to five years.

"Over time, the structural integrity of an oyster bar can be lost to natural forces like tropical storms and also because of intensive harvesting, since most of the oysters taken from this bay are exported with their entire shell to the oyster-on-the-half-shell market around the country," said Havens. "A net loss of shells equals a net loss of habitat which equals a need to replenish them by some other means than putting back the shells that are removed."

Havens said that the Gulf Coast Workforce Board is leading a re-shelling program of approximately 25 acres in Apalachicola Bay. Work is underway, with shells being transported to the restoration site by oystermen in their boats.

"Our best available information from computer models that take into consideration water flows, currents, nutrients and oyster growth dynamics indicates that the


bay is substrate-limited," he said. "This may result in a very long time for the population to recover."

Havens estimated that a large-scale shelling project (approximately 1,000 acres over five years) combined with at least two years of lowered fishing pressure could cut the recovery time down to three years or less.

Overfishing, the taking of oysters below the legal harvestable size, unreported harvesting and the taking of oysters from closed areas have also been consistently reported.

"A related critical step is for the oyster fishermen to follow all the rules and regulations regarding minimum size of oysters that can be harvested, about locations where harvest can occur, and about seasons when it is allowed to harvest," he said. "Those rules must be enforced by the state and fines levied on people who break the law."

"The population of oysters is greatly reduced at this time and highly sensitive to fishing pressure. Following the rules now will have a good long-term pay-off."



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## DEP, Marion County fund new sewer treatment plant for Silver Springs area

By **SUSAN TELFORD**

Backed by the Florida Department of Environmental Protection's Acquisition and Restoration Council, Marion County is moving forward with a sewer line project designed to improve water quality at Silver Springs.

The council voted to grant the county an easement over 4.5 acres of the property of the Silver Springs attraction for the installation of a new \$1 million sewage collection line.

Jointly funded by the county and state, the project will allow the county utilities department to decommission an older wastewater treatment facility located just a mile north of Silver Springs and reroute its wastewater to the county's newer Silver Springs Shores regional plant nine miles away.

The existing plant discharges treated wastewater into nearby basins that percolate into the ground, contaminating the springshed with nitrates.

"The plant was identified in a September 2009 county report as one of several sources of nitrates for the springs," said Flip Mellinger, director of Marion County Utilities.

Even running at less than half of its allowable capacity of 450,000 gallons per day, the plant discharges 1,800 pounds of nitrates a year into the aquifer.

Moving the sewer system's output to the newer plant will not only reduce the amount of pollution seeping into Silver Springs, it will help improve water clarity in the spring that was once one known for its crystal clear water and glass-bottom boat rides, and was once one of Florida's most popular natural attractions.

The September 2009 county report stated that there are 12,000 septic tanks bur-

ied within five miles of Silver Springs.

The proposed sewer line will be large enough to handle the wastewater disposal from the Silver River State Park, can accommodate other small privately owned wastewater plants, and can eventually handle the waste from area septic tanks identified as contributing to water quality degradation at the spring.



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# Farmton Conservation Management Plan approved by Volusia officials

By SUSAN TELFORD

The Volusia County Council unanimously approved the final actions for an agreement with the Miami Corp., a Chicago-based family-owned company, that transfers 33,224 acres in southern Volusia County to conservation land.

Considered the largest, single, private conservation easement transaction in the history of the state, the Farmton Conservation Management Plan and related easements and covenants permanently protects thousands of acres of wildlife habitat.

The plan was developed over a five-year-long process that was peer-reviewed by land managers, environmental groups and college professors. Councilwoman Pat Northey called the Farmton Local Plan "the best project for the wild and rural heart of the county."

The Farmton Local Plan, approved by the council in February, is considered a model for large-scale planning efforts. It created a 50-year generational plan for conservation and sustainable development in southern Volusia County.

The plan permanently preserves nearly 80 percent of the land, including a critical regional wildlife corridor and environmentally significant habitat.

The comprehensive, long-term development plan will set aside conservation land in exchange for allowing Miami Corp. to develop up to 23,000 homes and over four million square feet of commercial and industrial space.

As part of the deal, the council approved a conservation management plan to oversee the future management of 36,974 acres, including 1,415 acres the county receives as a preserve, as well as 31,809 acres in additional conservation easements and covenants.

In addition, the county agreed to vacate property boundaries for platted subdivisions that appeared on paper at one time, but were never built. This includes an "old paper" subdivision called Cape Atlantic Estates, an area considered a no-man's-land near Interstate 95.

Also in the plan is transfer of conservation easements. The Miami Corp. owned land that was covered by a conservation easement under the terms of a mitigation bank.

The county will hold covenants on part of the land until a master development plan is approved for the whole property. The property would then be legally transferred to an easement.

The agreement also contains a clause that states if a future county council action

reduces the density of development on the land, the land in the conservation covenant would revert to the property owner.

Included in the plan between the council and the Miami Corp. is the transfer of ownership of 1,415 acres of land to Volusia County that will become known as the Deering Preserve at Deep Creek. Audubon Florida was also a recipient of a conservation easement on the land.

The agreement allows for passive recreation including hiking, biking and equestrian trails that would be accessible by an extension of Pell Road at Maytown-Osteen Road.

The plan also gives Audubon Florida oversight and enforcement authority to ensure that the property is managed in accordance with the conservation management plan. According to county officials,

public access to the land would be phased in over the next eight years.

The Miami Corp. and its affiliates have owned the Farmton Tract since the 1920s and have managed the land for over 90 years. Miami Corp. is the largest private landowner in Volusia County and also one of the largest in Brevard County.

The Farmton lands are part of the wildlife corridor that connects more than a million acres from the St. Johns River to the Ocala National Forest, and provides habitat for bald eagle, swallowtail kites, black bears and bobcats.

"The plan has been a cooperative effort with the county and stakeholders," said Barbra Goering, vice president of Miami Corp. "We couldn't be more pleased with the results and what we were able to accomplish by working together."

## Sea level rise finally gets attention of long-range planners in Florida

By DAN MILLOTT

Former *New York Times* humor writer Russell Baker once differentiated stories making the rounds as "news" if they were current, and "olds" if they had become a part of accepted history.

So it is today with the now-accepted "olds" that the levels of our oceans are rising. And local government entities along the coast of Florida are beginning to take notice.

So are academics at the University of South Florida's College of Marine Science and the University of Florida's Department of Urban and Regional Planning.

In Pinellas County, the comprehensive plan was updated in 2008 and the county commission added an instruction "to plan responsibly for climate change, and educate citizens and stakeholders on matters so that they become partners in determining the county's future."

Boosting citizen awareness falls on the shoulders of men like Larry Arrington, Pinellas County's director of strategic planning and initiatives.

"We have to develop a vulnerability assessment for Pinellas County and that hasn't been done yet," he said.

Since 2008, Arrington's department, like many in Pinellas and across the state, has experienced extensive cutbacks. Despite that, he said staff has been monitoring and assessing the science and engaging in climate change dialogue when able.

Recent flooding incidents like last fall's Hurricane Sandy shine a spotlight on how fragile our coastal areas are.

Pinellas is not alone in taking note of the potential danger of rising ocean levels. The Tampa Bay Regional Planning Council is working with researchers at the University of Florida to formulate preventative plans that could save millions of dollars in flood damage in future years.

And on the lower east coast, Monroe, Miami-Dade, Broward and Palm Beach counties have formed a consortium aimed at planning and responding to rising sea level and climate change.

Recent flooding events prompted Arrington and his staff in Pinellas to seek more guidance from the commission. They call it a strategic priority because the county's peninsular location makes it increasingly susceptible to the effects of extreme weather and rising sea levels.

They are convening a multi-departmental county team to focus internal discussion on climate and sea level science, resiliency and adaptation, using the past disaster redevelopment plan as a framework for new strategy development.

The evidence of global warming and rising seas is piling up.

Don Chambers, associate professor at the College of Marine Science at the University of South Florida in St. Petersburg, said the rise in water levels is clearly attributable to the increase in carbon dioxide in the atmosphere. While this has been going on for centuries, Chambers says there is evidence of a recent acceleration.

"There has been a much higher rate in the last 100-120 years," he said. "Over the last 20 years, we have a lot better measurements of the global scale of sea levels."

Much of the ability to secure better measurements stems from the use of better technology. "We are now able to use multiple satellites and different types of instruments," he noted.

Of concern for scientists like Chambers is the gradual loss of the ice caps in both hemispheres. "Over the last 10 years, the loss of ice masses from Greenland has accelerated considerably."

While satellites have been helpful to scientists, Chambers points out that we have always been able to measure sea levels at locations. "What we didn't know was how much was due to thermal expansion or fresh water being added to the oceans by melting ice."

The satellites help scientists see the patterns of sea level rise. Gravity measures tell them how much the ocean mass is increasing.

Chambers concentrates on global mean sea level changes, but a colleague at USF, Dr. Gary Mitchum, professor of physical oceanography, conducted an intensive study in 2011 on sea level changes in the Southeastern U.S.

Mitchum said that in the second half of the 20th century, seas were rising at 1.5 to 2 centimeters per decade. But a calculation made from 1992 into the 21st century pegged that increase at closer to 3 centi-

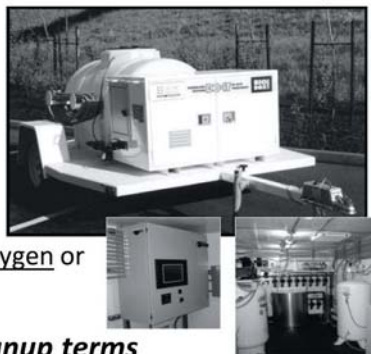
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# Researchers uncover more evidence of ecosystem damage from Deepwater Horizon oil spill

By ROY LAUGHLIN

An interdisciplinary team of researchers from the University of South Florida is crafting a carefully researched image of the long-term effects of the Deepwater Horizon oil spill on deep-sea organisms.

They have documented a collapse of the informal community in DeSoto Canyon sediments, the subsequent changes in sedimentation patterns and a recent recovery.

Because sediments are the Gulf of Mexico's "archive," the legacy of environmental damage from the oil well blowout will likely be visible in this environmental compartment.

That's the story David Hollander, professor of marine science in the Chemical Oceanography Division of the University of South Florida, and his colleagues have carefully deciphered since 2005.

Hollander began studying sediment biogeochemistry and the biological community in the DeSoto Canyon in 2005, well before the oil well blew out in 2010.

Sedimentation rates were about 3 millimeters per year, there was little oil present and the infaunal community was dominated by two species of foraminiferans: one infaunal and one epifaunal. Multicellular infauna was largely dominated by worms that completely mixed surface sediments through their feeding activity, a process called bioturbation.

But the well blowout and oil spill changed everything.

Sedimentation rates in 2010 increased to more than 3 centimeters. The new sediments contained enough oil to darken it and its hydrocarbon fingerprint matched the oil from the Macondo well.

The resulting "sediment blizzard," as Hollander characterized it, was followed by an almost complete die off of infaunal and epifaunal forams and the infaunal

macroorganisms that fed on them. Absent organisms, bioturbation ceased.

Recent sediments, rather than appearing blended, appeared layered with bands of dark oil-enriched sediments and lighter, less oiled or unoled sediments.

Hollander's team was interested not only in characterizing the changes, but also explaining them.

The sediment composition changed in the summer of 2010 not only because of oil. The sediments were dominated by fine particulates.

The temporary dominance of fine particulates, Hollander hypothesized, was a result of multiple factors. They originated from Mississippi River flow. Engineers opened Mississippi River flood gates, admitting water to Louisiana's marshes, hoping the flow would push oil away from them.

That flow carried the fine clay particulates with it and into the Gulf. When those particulates encountered oil and dispersants, they combined with them.

Ballasted by the clay in the combined particles, the dispersed oil now too heavy to float, sank to the bottom.

"The dispersants promoted transition to small droplets of oil that brought the fines (clay particles) to the sediments," he said. "This is a well documented phenomenon."

The combined particulate of clay, dispersant and oil was responsible for an order of magnitude greater sedimentation over a parts of the DeSoto Canyon. Sediment concentrations of BTEX and polynuclear aromatic hydrocarbons increased up to 500 times above background, said Hollander.

Hollander said his research group's characterization of the blowout's contribution to oil in sediments has been quite revealing. "The sedimentary accumulation accounts for up to 10 percent of the dis-

charge," he said. "It is a budget that cannot be ignored."

Both the high sedimentation rates, which could have smothered some infaunal organisms, and a high hydrocarbon burden, which could poison others, were responsible for collapse of the benthic community immediately after the oil blowout.

Hollander's research, assisted by postdoctoral research assistants Isabel Romero and Patrick Schwing, continued after the oil spill ended.

Sedimentation rates have now returned to pre-spill levels. The infaunal community is recovering but with some notable changes, according to Hollander. Epifaunal forams have returned but the species now present is not the same as that before the spill.

The infaunal community is also recovering. Infaunal forams, however, have not recovered.

"Oil in sediments is not declining even though bioturbation at slower rates is returning," said Hollander in explaining that oil is still affecting activity and abundance of the in faunal community

This research gives a unique view to a process of sediment contamination by oil

and subsequent recovery of a wiped out biological community in those sediments. It is valuable because of the multi-year pre-contamination characterization.

Its detailed set of observations during contamination includes both biogeochemical and ecological characterization. The most recent observations characterize a slow recovery.

Hollander explained that their research had a substantial serendipitous component. The first was the five years of observation prior to contamination. The second was that an oil plume from the well intersected their study site in the DeSoto Canyon.

If they had been studying another location in the Gulf, they might not have been so well positioned to observe interactions of oil, dispersants, fine sediments and the influence of oil-enriched sedimentation on infaunal organisms.

Hollander also noted that University authorities made an expeditious decision to fund their ship time when grant funding was not available.

He characterized sediments as the oceans' "archive" because the oil from the Deepwater Horizon's blowout will persist for years. Biological recovery, which is occurring slowly, also appears to be taking years.

## New projects will improve ecosystem of southern Indian River Lagoon

By PRAKASH GANDHI

The Indian River Lagoon received a big boost recently when work started on eight projects costing a total of about \$1 million. The projects, which will benefit the ecosystem in Martin and St. Lucie counties, are designed to restore salt marshes, reduce estuary sediments and improve water quality.

The projects were recommended for funding by the St. Lucie River Issues Team, a 15-member group representing organizations working together to accelerate and implement projects with benefits to the St. Lucie River and the IRL.

Since the team was formed in 1998, its recommended projects have received \$63 million from the Florida Legislature, more than \$65 million from local partners and \$2 million from the federal government.

So far, they have restored more than 4,671 acres of wetlands and 25,940 feet of shoreline throughout the lagoon and its watershed.

The lagoon is North America's most diverse estuary with more than 4,300 species of plants and animals including 35 that are listed as threatened or endangered.

The diversity of the lagoon draws million of boaters and fisherman annually, which brings tens of millions of dollars into the region.

But there have been growing concerns about the future of the lagoon ecosystem, especially in the southern portion where frequent freshwater discharges seriously threaten water quality and contribute to large algae blooms.

Mark Perry, executive director of the Florida Oceanographic Society, praised the projects.

"These are very important projects that will keep the lagoon's restoration program going," he said. "These projects are not enough to restore the lagoon, but they are an important step in the right direction."

Besides its economic importance as a magnet for boaters, fisherman and other recreational users, the lagoon is valuable environmentally and has been designated as an estuary of national significance. Seagrasses cover more than 100,000 acres and are a critical component of the lagoon's overall health.

"The lagoon has taken a big hit in recent years and the damage to the environment affects the economy as well," Perry said. "People don't want to live on a body of water that has no fish or no boating."



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## 2013 Florida legislative session ripe with environmental and water-related bills

By JOHN J. FUMERO, ESQ and THOMAS F. MULLIN, ESQ

While continued environmental regulatory reform was initially considered to be a low priority in Tallahassee this year, it turned out to be an active legislative session for environmental and water-related bills. Both the 2011 and 2012 sessions included major changes to environmental and growth management laws.

Stormwater management, water supply, water quality trading, public-private partnerships and numeric nutrient criteria were just a few of the subjects addressed by the Florida Legislature in 2013. Overall, during the 2013 session, a total of 286 bills passed both the Senate and House. Gov. Scott signed 37 bills and vetoed 11. The remaining bills were passed without signature.

The appropriations bill, SB 1500, included a relatively modest budget for conservation and Everglades restoration. Florida Forever was approved for \$70 million total with \$10 million from general revenue, \$10 million from the Land & Water Trust Fund for military buffers and \$50 million from sales of surplus lands by the Florida Department of Environmental Protection. Everglades restoration projects were authorized for \$70 million from trust funds. Springs protection was granted \$10 million by the Legislature. Greenways and trails funding was approved for \$10 million a year for five years from the Florida Department of Transportation Trust Fund.

### Numeric nutrient criteria

Numeric nutrient criteria are the regulatory criteria established by DEP to regulate the discharge of nutrients, namely nitrogen and phosphorus, into the state's waterbodies. The NNC resulted from years of litigation between environmental advocacy groups, the DEP, the U.S. Environmental Protection Agency and other interest groups. SB 1808 represents the final step in resolving the DEP/EPA struggle over NNC.

The bill directs DEP to establish specific numeric nutrient criteria for unimpaired waters and for those estuaries and non-estuarine coastal waters without numeric nutrient criteria established by rule or final order. SB 1808 orders the DEP to establish estuary-specific nitrogen, phosphorus and chlorophyll-a criteria for any estuaries not already subject to NNC, and establish chlorophyll-a criteria for non-estuary coastal waters by Dec. 1, 2014. The bill directs DEP to send a report to the Legislature and governor conveying the status of establishing numeric nutrient criteria. Providing direction for implementing the NNC, the bill codifies the document titled "Implementation of Florida's Numeric Nutrient Standards."

In essence, SB 1808 finalizes Florida's assumption of the regulation of nutrients in its waterbodies. However, the federal court must approve an amendment to the consent decree authorizing DEP to assume primacy in NNC regulation. Further, the EPA's 2009 determination letter finding that NNC for Florida were necessary must be withdrawn.

### Environmental regulation

HB 999 was the vehicle by which a myriad of changes to environmental laws was accomplished. Among other things, the bill limits the ability of local governments to request additional information on development permit applications to three requests unless waived by the applicant. The bill authorizes the lease of sovereign submerged lands for use as marinas, boatyards and marine retailers, with restrictions. It also reduces the lease fees assessed for docks constructed over state-owned submerged lands.

The bill revises how a water management district will deal with competing water use permit applications. Further, HB 999 provides that a WMD may not reduce an existing permitted allocation of water as a result of water becoming available from a new seawater desalination plant that is not funded by a WMD.

HB 999 provides that WMDs, existing delegated local governments or delegated local county health departments have exclusive jurisdiction to issue well permits. However, those local programs without an existing delegation are restricted from implementing well permitting programs. Under the bill, WMDs are the only entities authorized to issue licenses to water well contractors.

HB 999 authorizes several new permit exemptions related to agricultural ponds and unauthorized changes to surface flow by adjoining property owners. Similar to SB 948 discussed below, HB 999 provides that the state Department of Agriculture and Consumer Services is given greater role in regional water supply planning.

The bill specifies how the DEP calculates annual fees for air pollution operation licenses. HB 999 provides that interstate natural gas pipelines qualify for expedited permitting under Chapter 403.

On the last day of the session, the legislature removed some controversial provisions from the bill. First, the moratorium on fertilizer regulation by local governments was removed. Also, the section concerning impacts to wetlands by water control districts was stricken. Finally, the approved bill did not include provisions related to payment of fees charged to governmental entities for stormwater utility bills.

### Water supply

SB 948 strengthens the role of agriculture in the water supply planning process. It does so by adding DACS to the list of agencies the WMDs must consult with for regional water supply planning. Further, the WMDs must include agricultural demand projections in their regional water supply plans. In addition, DACS must establish an agricultural water supply planning program that uses best available data to determine agricultural demand.

Additionally, SB 948 adds utility companies, private landowners, water consumers and DACS to the list of entities that should cooperate to meet water needs. Finally, the bill requires WMDs to engage with, and assist, "self-suppliers" during the regional water supply planning process.

### Liability of design professionals

SB 286 creates a new Section 558.022, Florida Statutes, which limits the professional liability of "design professionals." A design professional includes a licensed architect, interior designer, landscape architect, engineer, surveyor or geologist. Geologist is a new profession added to the definition. SB 286 provides that design professionals are not individually liable for damages resulting from their negligence occurring within the course and scope of professional services while employed or acting as an agent of a business entity.

The bill provides specific conditions that must exist for such limitation on liability to apply. Namely, the contract between the business entity and claimant must not name the design professional as a party to the contract, the contract must clearly state that an individual employee or agent may not be held individually liable, the business entity must maintain professional liability insurance pursuant to the contract, and the damages alleged are economic and do not extend to personal injuries or property not subject to the contract.

### Water quality credit trading

After several attempts, the Legislature finally opened water quality credit trading throughout the state. Previously, trading was limited to a specified geographic area in the lower St. Johns River basin.

The bill provides that DEP may authorize water quality credit trading through basin management action plans and that participation is voluntary. Point or nonpoint sources that will achieve greater reductions than required by an adopted total maximum daily load or waste load allocation are now authorized to generate, register and trade water quality credits created by excess reductions to enable other sources to achieve their reduced allocation.

However, the generation of water quality credits does not remove the obligation of a source or activity to comply with applicable technology requirements or adopted best management practices. The sellers of water quality credits are responsible for achieving the load reductions on which the credits are based, as well as complying with the terms of applicable permits and any trading agreements into which they may have entered.

### Public-Private Partnerships

HB 85 creates the Florida Public-Private Partnership Act, which contains standards for agreements between public entities and private entities to finance, construct, develop or upgrade facilities or other public infrastructure defined as "qualifying projects." Water, wastewater and surface water facilities are included as qualifying projects. The bill addresses the procurement process, project qualification processes, project approval requirements and comprehensive agreement requirements for qualifying projects.

HB 85 authorizes, but does not mandate, governmental entities to accept unsolicited bids and sets forth the notice/procedural requirements after receipt of an unsolicited bid. Once the public entity agrees to enter into a partnership, the bill specifies the information that must be contained within the comprehensive agreement between the public and private entities.

Finally, HB 85 creates a task force for the purpose of recommending guidelines for creating a uniform process for establishing public-private partnerships, including the types of factors public entities should review and consider when processing requests for public-private partnership projects.

### Consumptive use permits for alternative water supplies

To provide incentives, SB 364 creates longer duration permits for alternative water supplies. The bill requires issuance of a permit duration of at least 30 years, and possibly as long as 37 years, for an alternative water supply project. Strengthening water conservation efforts, the bill prohibits the WMDs from reducing the AWS allocation during the 10-year compliance review, unless a reduction is needed to address adverse environmental impacts or interference with existing legal users. A permit authorizing the use of non-brackish groundwater supplies or non-alternative water supplies may not enjoy the longer duration process of this bill.

### Onsite sewage treatment and disposal systems

HB 375 revises and reduces some of the onsite sewage treatment and disposal system (septic tank) permitting and inspection requirements that were imposed by the Legislature over the past several years. The bill provides that single-family homeowners may be approved by DEP to operate and maintain their own onsite sewage systems. To do so, an owner-occupied, single family homeowner must receive certification from the treatment system's manufacturer that the property owner received training on service and installation of the system. Additionally, the bill revises the compliance dates and compliance criteria for onsite treatment systems in portions of Monroe County and the Florida Keys.

### Manufacturing development

HB 357 creates an expedited permitting and development approval process for manufacturing projects, either new construction or the expansion of an existing facility. Under the bill, a local government may develop a local manufacturing development program that sets forth procedures and criteria for approval of a master development plan. During the term of the master development plan, the local government may not require additional local approvals other than building permits.

Once a manufacturer applies for a master development plan under an approved local government manufacturing program, the Florida Department of Economic Opportunity shall coordinate the permit approval process with other participating agencies including the Florida Department of Environmental Protection, Florida Department of Transportation, Fish and Wildlife Conservation Commission and the WMDs.

The approval process for permits from these agencies must occur simultaneously with one another. The timeframes for approval from the participating agencies are reduced for manufacturing projects. The DEO will keep a list of all local governments with local manufacturing development programs and may promote those local governments to businesses seeking to conduct business in Florida.

### Water management districts

SB 244 provides for the adoption of certain reservations and minimum flows and levels by the DEP. The bill requires WMDs to apply, without adopting by rule, the reservations, minimum flows and levels, and recovery and prevention strategies adopted by DEP.

SB 244 also requires a regional water supply authority and the applicable WMD to jointly develop the water supply component of the regional water supply plan, including use of interagency agreements, when the geographic area of a study or project crosses WMD boundaries.

### Everglades improvement and management

Everglades restoration and funding is typically a hot topic each year. This year's bill, HB 7065, provides an additional funding mechanism for Everglades restoration while encouraging agricultural property owners to implement best management practices to reduce the flow of nutrients into the Everglades.

The funding is accomplished through a new per-acre tax for agricultural property located in the Everglades Agricultural Area to fund an \$880 million Everglades restoration plan. Additionally, the bill authorizes \$32 million annually from general revenue and trust fund for DEP's Restoration Strategies Regional Water Quality Plan.

### Stormwater management permit

SB 934 authorizes certain municipalities and counties to adopt stormwater management plans and obtain conceptual permits from the DEP or WMD for urban redevelopment projects. The conceptual permit must meet specific conditions outlined in Section 373.41305(2).

John J. Fumero and Thomas F. Mullin are attorneys in the Boca Raton office of the statewide law firm Sundstrom, Friedman & Fumero LLP. They may be reached at (561) 982-7114, or [jfumero@sfflaw.com](mailto:jfumero@sfflaw.com) and [tmullin@sfflaw.com](mailto:tmullin@sfflaw.com).

## Florida Specifier

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



# Calendar

## June

JUNE 5-7 – Course: Train the Trainer: How to Design & Deliver Effective Training, Orlando, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 5-7 – 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](http://www.treeo.ufl.edu).

JUNE 6 – 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](http://www.treeo.ufl.edu).

JUNE 7 – Course: Backflow Prevention Recertification Exam, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 8-16 – Course: Backflow Prevention Assembly Tester Training and Certification, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 8 – 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](http://www.treeo.ufl.edu).

JUNE 10-12 – Course: Asbestos: Inspector, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 10 – 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](http://www.treeo.ufl.edu).

JUNE 11-13 – Course: Water Distribution Systems Operator Level 1 Training Course, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 12-14 – Conference: 2013 Annual Conference of the Florida Stormwater Association, Ft. Myers, FL. Call 1-800-221-3124 or visit [www.florida-stormwater.org](http://www.florida-stormwater.org).

JUNE 13-14 – Course: Asbestos: Management Planner, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 15-16 – Course: Initial Training Course for Transfer Station Operators and Material Recovery Facilities-16 Hour, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 15 – 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](http://www.treeo.ufl.edu).

JUNE 15 – Course: Spotter Training for Solid Waste Facilities, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 17 – Forum: Save the Silver & the St. Johns, Jacksonville, FL. Presented by the St. John Riverkeeper, Florida Springs Institute, Sierra Club and Center for Earth Jurisprudence. Call (904) 256-7591 or visit [www.stjohnsriverkeeper.org](http://www.stjohnsriverkeeper.org).

JUNE 17 – Course: Introduction to Backflow Prevention, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

JUNE 17-21 – Course: Wastewater Class A Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 17-20 – Conference: 22<sup>nd</sup> Annual Southeastern Lake and Watershed Management Conference and the 24<sup>th</sup> Annual Florida Lake Management Society Technical Symposium, Daytona Beach, FL. Visit [www.flms.net](http://www.flms.net).

JUNE 18-19 – Course: Cross-Connection Control: Survey & Inspection, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 18-21 Course: Wastewater Class B Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 20 – Meeting: Monthly Meeting of the Central Florida Association of Environmental Professionals, Orlando, FL. Contact Amy Guilfoyle at (407) 240-1127 or [aguilfoyle@ppmco.com](mailto:aguilfoyle@ppmco.com).

JUNE 20-21 – Course: Cross-Connection Control: Ordinance & Organization, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 24-26 – Course: Lead: Inspector, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 24 – Course: Lead Refresher: Risk Assessor, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 27-28 – Course: Lead: Risk Assessor, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 27-28 – Meeting: Annual Meeting of the American Water Resources Association, Cocoa Beach, FL. Hosted by the Florida Section of AWRA. Contact Garrett Wallace at (561) 504-6877 or visit [www.awraflorida.org](http://www.awraflorida.org).

JUNE 28 – Course: Backflow Prevention Recertification Review, West Palm Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JUNE 29 – 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](http://www.treeo.ufl.edu).

JUNE 29 – Course: Backflow Prevention Recertification Exam, West Palm Beach, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

## July

JULY 6 – 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](http://www.treeo.ufl.edu).

JULY 8-12 – Course: Backflow Prevention Assembly Tester Training & Certification, Altamonte Springs, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JULY 9-12 – Course: Wastewater Class C Certification Review, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JULY 9-11 – Course: Respiratory Protection, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JULY 11-13 – Conference: Annual Conference of the Florida Section of the American Society of Civil Engineers, Sarasota, FL. Call (561) 215-4311 or visit [www.fla-asce.org](http://www.fla-asce.org).

JULY 12-13 – Course: Backflow Prevention Assembly Repair & Maintenance Training & Certification, Venice, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JULY 15-19 – Course: Backflow Prevention Assembly Tester Training & Certification, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JULY 19-27 – Course: Backflow Prevention Assembly Tester Training and Certification, Fort Myers, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JULY 20-28 – Course: Backflow Prevention Assembly Tester Training and Certification, Tampa, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JULY 20 – 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](http://www.treeo.ufl.edu).

JULY 23-26 – Course: Water Distribution Systems Operator Level 2&3 Training and Certification, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570 or visit [www.treeo.ufl.edu](http://www.treeo.ufl.edu).

JULY 23 – Course: Lift Station Maintenance, Gainesville, FL. Presented by the University of Florida TREEO Center. Call (352) 392-9570.

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# Greener remedial action plans can reduce labor, capital costs for site cleanups

By LAURA GIMPELSON, PE

The last three years have seen an increase in the submittal of greener remedial action plans, GRAPs, even if the submitter is only using individual GRAP elements in traditional RAPs.

GRAPs seek to reduce the energy and resources—including labor and capital—to clean up a site when compared to traditional RAPs. Individual elements include reducing on-site and office waste streams, reusing waste streams, requiring fewer trips

to sites for maintenance and performing less sampling.

One of the most common recent applications of GRAPs is the reduction in the number of paper copies of reports or letters being submitted. Every agency comment letter I have received in the last three years now requires only one paper version and one electronic copy.

In Orange County, for example, staffers have requested that reports not be

placed in binders. They do not have room to store the binders in their files and prefer to use the electronic version when reviewing most submittals.

A second GRAP element that is reducing costs applies to quarterly sampling requirements, especially for non-program sites. Requests to stop analyzing groundwater samples between annual sampling events are being accepted. By reducing the quarterly sampling requirements as goals are met, the quarterly sampling events can be completed at lower overall cost and labor demand.

At one non-program site, the case manager approved the end of analyzing individual parameters when the parameter was detected below the GCTLs for two consecutive quarters. This reduced the number of wells being sampled quarterly by 50 percent and lab costs by 25 percent.

Further reducing the cost of sampling is the use of passive sampling equipment instead of purging to obtain groundwater samples. Passive samplers have been approved for a few sites in Florida and are being encouraged by the U.S. Environmental Protection Agency at Superfund sites in Texas. One site that switched to passive samplers reduced sampling time by 70 percent and disposal costs by 99 percent.

The creative use of waste streams has

reduced the need for virgin materials at several source removal sites. Angela Finney of AMEC discussed using a substitute for sand at the 2012 Florida Remediation Conference. The project replaced approximately 80 tons of fine sand fill with crushed glass from a fluorescent recycling plant keeping the waste stream out of the landfill and reducing the need for clean fill by 25 percent.

Other source removal projects reuse excavated soil after it has been thermally treated at Clark Environmental's facility in Mulberry. The treated soil is returned to the excavation site eliminating the need for clean fill from another source.

Finally, in-situ processes are being considered as equals to air sparge/vacuum extraction remedial action processes, especially if a plume has migrated underneath buildings or other structures.

In Orlando, Shaw Environmental is using in-situ reactions to destroy an organic plume that extends underneath the area around the Amway Center and nearby elevated highways.

Greener remedial action plans are not limited to using in-situ alternatives to traditional clean up practices. GRAPs include any practice that reduces waste, labor, resources and expenses.

Laura Gimpelson, PE, president of LG Environmental Engineering in Orlando, can be reached at lg\_environmental@bell\_south.net.

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# MARAD joins Navy to sink use of decommissioned ships as artificial reefs

By ROY LAUGHLIN

Over the past decade, no less than four decommissioned military ships have been sunk in Florida waters to make artificial reefs. Those will likely be the last. The supply of pre-1985 ships available for reefing has, at least temporarily, dried up.

Last June, the Marine Administration Office, MARAD, without much ado prepared a Frequently Asked Question document for state agencies and others interested in obtaining maritime administration ships for artificial reef projects.

The document established three exclusions for reefing vessel suitability: Those that were in poor or unsafe conditions, or an environmental threat; vessels within 24 months of being disposed of through a more expeditious method; and vessels built prior to 1985.

The first two, however subjective they might be, had always been used as selection criteria. The final one, primarily based on the widespread presence of PCBs in materials used on ships prior to that year, was new. MARAD added it with little if any discussion with state agencies that had, since 2001, been able to acquire MARAD ships of the pre-1985 era for reefing projects.

The new policy is not a direct departure from MARAD's mission. It is charged with disposing of surplus ships in the U.S. National Defense Reserve Fleet, vessels kept in reserve for need during national emergencies.

There is a steady rotation through this reserve fleet. Those in the best condition are designated Ready Reserve Force. The fourth category, non-retention vessels, are ready to be scrapped or available for title transfer to states, territories or tribes for artificial reefing projects.

The authorization for transfer of MARAD ship to states for reefing was given only in 2001. Prior to that, MARAD's practice was to sell through a sealed bid process to scrap processors, which made money for MARAD.

The economic circumstances act at two points to make reefing projects less appealing to MARAD.

First, the current price of scrap steel is

so high that reefing projects have become increasingly less economically beneficial than selling for scrap.

The cost of delays and efforts to prepare an older ship for reefing are the second strike against reefing efforts and compares unfavorably in the profitability comparison to scrapping as the preferred option.

While MARAD's economic returns are best served by scrapping ships, Keith Mille, an environmental specialist with the Florida Fish and Wildlife Conservation Commission, said that an artificial reef is usually a substantial boon to local economies.

He backed up his comment with a study conducted by Vernon Leeworthy, "The Economic Impact of the USS Vandenberg on the Monroe County Economy." This study found an increase of \$6.5 million in total recreational expenditure in the post deployment period of the ship as an artificial reef, compared to a similar predeployment period.

Environmental costs for reefing are a big factor in MARAD's decision. In their 2012 document, the agency stated explicitly that its involvement with a ship destined for reefing "may take years due the environmental documentation and review requirements, including the development, submittal, review and acceptance of the critical vessel sampling, cleaning and testing plan to the EPA."

Mille agreed with the assessment of the time and effort required for the preparation work involved, but said that "we can effectively clean and prepare any vessel regardless of its condition."

It costs more, but recipients of vessels picked up the tab for the remediation, he said.

"There is a historic component in relation to the perceptions of citizens or veterans," said Mille regarding which ships are the most attractive candidates for reefing projects.

The reefs bring continuing economic benefits to coastal communities. In the case of the USS Oriskany, sunk off the coast of Pensacola, a veterans' group conducts an annual remembrance service over the wreck. This annual pilgrimage brings tourists and their wallets to Pensacola.

Mille mentions the Oriskany as a spe-

cial case because it was the most expensive reefing project, at least in Florida and perhaps nationwide.

"We may not be interested in a vessel because of costs, but we'd like to make that decision on a case-by-case basis. Local governments or donors may be willing to pay whatever it takes to sink it properly," said Mille.

The Oriskany is often at the center of any debate about the merits of using ships as artificial reefs. Opponents of artificial reefs often prefer a pristine environment. The Oriskany project caused elevated PCB bioaccumulation in fish caught around it.

Mille noted that the Oriskany project was specifically permitted as a PCB dis-

posal project. Risk assessments inaccurately predicted the extent of PCB mobilization that occurred since ship placement.

In spite of that failure, Mille noted that shipwrecks promote fisheries and marine conservation by providing high quality vertical structures in the environment that provide habitat needed for substantial populations of marine organisms.

In February, the Joint Artificial Reef Subcommittees of the Atlantic and Gulf States Marine Fisheries Commissions discussed last summer's new MARAD policy putting reefing on the back shelf in deference to scrapping surplus ships. The group expects to prepare a letter to MARAD asking for reconsideration.

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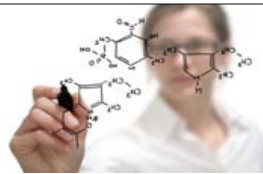
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## Report calls for more ecosystem-friendly seismic surveying off the coast

By ROY LAUGHLIN

Environmental advocacy group Oceana released a report this spring calling for the end of seismic air gun surveying off the Atlantic coast.

The report characterized extensive injury to marine mammals, sea turtles, and fish eggs and larvae as a result of high- and low-pitched sounds produced by seismic instruments.

The report is particularly opposed to the use of air guns for generating sound of sufficient intensity to penetrate the ocean bottom and return an echo that may indicate the presence of gas or petroleum resources.

"They (the Bureau of Ocean Energy Management) could phase out air guns in three to five years," said the report's author, Matthew Huelsenbeck, an Oceana marine scientist. "We're pushing the Department of the Interior and Congress for a phase out."

The report is based on nearly 100 cited sources of information, most of them relatively recent. The authors reviewed the unusual occurrence of marine mammal strandings and deaths following seismic testing off Peru, Madagascar and other areas where seismic testing occurred. A decline in fisheries in the North Sea following seismic testing is also discussed in some detail.

The report couches the potential biological and environmental damage in economic terms.

Federal waters off Florida from Cape Canaveral northward are part of a proposed seabed area to be opened between 2013 and

2017 for seismic prospecting.

According to the report, some portion of the state's \$284 million seafood industry and \$15 billion tourism business is at risk to seismic prospecting damage.

That could influence a regional portion of the state's 300,000 tourism and recreation jobs and nearly 64,000 commercial fishing jobs.

The report suggests four alternatives to the proposed seismic surveying.

The first is to make seismic data publicly available. This will reduce the current practice of each interested company conducting its own proprietary survey.

The report said multiple surveys substantially increases the damage caused by high-intensity sound.

The report also urged the elimination of air guns to generate sound, and expanded use of marine vibroseis methods as an alternative. This technology, still under development, may have the benefit of "cleaner sound," and is seen as a less harmful alternative.

Hueselbeck noted that in its 2012 environmental impact statement, DOI eliminated marine vibroseis as a serious alternative. He believes that DOI should do a supplemental study to further characterize alternatives to air guns.

In addition, the report said that the creation of large "no-activity zones" for sensitive habitats and species is essential. However, not a single no activity zone is included in the 2012-2017 plan outlined

**SEISMIC**  
Continued on Page 16



## CLEANUP

From Page 1

said. "We do not know how many contractors we will need. We have thousands of sites."

Although the number of contractors is not slated for substantial reduction, all future contractors will be in the same state group. Both existing state contractors as well as prime contractors will have to undergo a selection process.

"My recommendation is that interested contractors need to make sure that they are registered appropriately on Florida's MyFloridaMarketPlace (the state's online exchange for buyers and vendors)," said Valerie Huegel, acting chief of BPSS.

Registrants should sign up to receive

electronic notifications, confirm that contractors use DMS Class and Group codes 991-320 for Environmental Cleanup And Restoration, 991-325 for Environmental Cleanup and 970-400 for Environmental Engineers.

Existing contractors should review their current registration to be sure that it meets the new contracting requirements.

More information about new contracting requirements will be provided at a stakeholders meeting planned by DEP in the near future.

Expected among the new requirements will be that contractors must sign an affidavit declaring that they have not offered money or any other consideration to ensure contract selection.

The relationship between contractors and property owners or responsible parties is also subject to change. DEP will assume a predominant role in selecting contractors for specific remediation projects. Work oversight, cost verification and equipment loans also face tighter management rules that in the past.

DEP is on a tight schedule to meet its rulemaking milestones, with a completion date of Dec. 31.

Some contractors interviewed off the record for this article expressed skepticism that DEP would be able to meet the aggressive rulemaking deadlines, a concern also shared by DEP officials.

"Delay is a valid concern. But we cannot speculate on outcomes," said Caspary. "We are engaging almost daily for recommendations for rule development. I've met with just about everyone who wants to talk to me."

The next step in rulemaking will be the submission of draft rules to the Legislative Budget Commission by July 1 for their oversight and approval. A rulemaking workshop is set for June 19 in Orlando that will provide industry professionals with an opportunity to comment on the draft rule.

To the extent that the reform was motivated by the findings of a preliminary Inspector General's report, the commission has a clearly defined set of issues and recommendations, as well as instructions from the Legislature.

"The bill language sets the stage for what we need to do," said Caspary. It's reasonable to expect that if the language is followed, LBC approval will occur without delay.

Meeting the scheduled milestones is important to the cleanup industry because up to \$125 million in remediation work is dependent upon it. The legislation requires the bureau to obligate up to \$50 million of remediation work before July 1, 2013.

The availability of the remaining \$75 million is contingent upon rule completion by Dec. 31, 2013.

According to Huegel, at the present time, the umbrella rules for state contracting still apply. Assuming DEP expeditiously establishes its list of state contractors, monies can begin to be obligated.

Caspary was wary of providing specific rulemaking details at this time, but vigorously asserted that he understood the critical nature of continued funding for the

cleanup industry.

One contractor interviewed said that in the absence of adequate state funding, contractors may begin furloughing employees this fall.

Caspary responded to that by noting, "We are very optimistic that we are on schedule. It is important to keep the program going. No one wants to shut it down," he said.

The six weeks between the middle of May, when this article was written, and July 1 are critical weeks for both contractors whose members must get on the new state contractor list as well as the bureau, which must satisfactorily obligate up to \$50 million in remediation work and have developed at least the essential components of a draft rule for a process that must be completed by the end of the year.

In the longer term, rulemaking faces two additional influences. The Inspector General's investigation is continuing to provide more information about problems within the program identified between December 2012 and March 2013.

Until additional findings are released, there's no reasonable way to predict the investigation's influence on rulemaking.

There is more than a small amount of speculation among contractors that civil or criminal charges could result from program abuses that motivated reform. Even without formal charges, some contractors with a spotty background could be weeded out of the program. If that occurs, it will certainly affect the fortunes of many.

Another concern is that the rule could be delayed by legal challenges, particularly since up to \$75 million in contract funding could be influenced by the delay mediated by challenges to the rule.

Caspary said that he is aware of that possibility, but that the rule would not be subject to multiple challenges that could delay final adoption by months or longer.

The critical issue for those organizations involved in the program is the continuity of funding. If DEP obligates currently available funds and can find a way to have the remaining transition money available after July 1, the RFQ and contractor selection process is prompt, the plan and LBC approval is prompt and all parties involved in the rulemaking process commit to approval by Jan. 1, then the industry can maintain its current pace of work.

But that is a tall order and time is short.

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## Bradenton aquifer storage and recovery well now operational

By DAN MILLOTT

When talking about his city's now operational aquifer storage and recovery well, Wayne Poston, mayor of the city of Bradenton, noted that the public works director whose name appeared on the early applications for the well retired four years ago.

The city's ASR, finally operational in late 2012, began its birthing process in 2002.

Why did it take so long?

For years, the state of Florida resisted the use of ASR wells because free oxygen in the water can cause arsenic contamination.

As a result, to get an ASR well to pass muster with the Florida Department of Environmental Protection and U.S. Environmental Protection Agency, numerous testing hurdles had to be overcome.

"This is part of a 10-year process," said Jim McLellan, engineering section manager for the city's Public Works and Utilities Department. "We have just completed a third year of testing with that system in place to demonstrate that we do not mobilize arsenic."

The objective of an ASR well is simple: store water underground during wet periods and pump it back to the surface for use during dry periods.

McLellan said that when water is recovered from the well, it is first disinfected before being pumped into the city's drinking water distribution system to supplement supply.

"Basically what we are doing is putting water into storage during the wet season as it flows over the dam at the city's Braden River Reservoir."

He said the city currently has the capacity to store as much as 160 million gallons of water underground. "The reservoir can store 1.4 billion gallons so the ASR represents about 10 percent of additional storage capacity," he said.

McLellan said there were several problems to address when the ASR was first being implemented.

"When you inject water, it has a tendency to release oxidants that are stored in the soil matrix due to a chemical process that occurs," he said. "What you have to do is to remove all the oxidizing agents from the water before you put it in an underground environment."

So the city Public Works Department devised a solution.

"We put the water through a membrane process that removes all the oxygen that's in the water," he said. "The groundwater by itself has no oxygen and by putting water in that has no oxygen as well, we don't change the underground environment allowing arsenic to be mobilized."

The Bradenton ASR is the first system of its kind in Florida.

"We built it as a full-scale pilot system," McLellan said. "It was done to demonstrate that it could work, but we built it as a full-scale unit so that if it did work, we could

ASR  
Continued on Page 16



# National biodiversity observation network initiated to study ocean health

By SUSAN TELFORD

We depend on the ocean to feed us, control the earth's climate, to ship goods, travel worldwide and for many more of our needs. Yet, there is no well-established marine biodiversity network that studies the health of the oceans.

In fact, little is known about how the ocean ecosystems, spanning 90 percent of the earth's habitable volume, are functioning and changing.

"Biodiversity observation networks are indispensable tools, allowing scientists to follow and predict ecosystem changes to facilitate proactive responses to environmental pressures," said Gustav Paulay, co-author of "Envisioning a Marine Biodiversity Observation Network" and invertebrate zoology curator at the Florida Museum of Natural History at the University of Florida.

"We need more awareness. More awareness comes from educating others about what is going on," said Paulay.

Following a workshop sponsored by U.S. federal agencies in 2010, researchers at eight institutions proposed a blueprint for establishing a cooperative marine biodiversity observation network to monitor trends in marine ecosystem health, and the distribution and abundance of ocean life.

"Tracking diversity is not just about tracking fish, or whales, or corals—but everything," said Paulay. "To date, there have been few attempts to track biodiversity broadly in the ocean. Biodiversity is important not only because it's what the natu-

ral world is about, but also because tracking it tells you how healthy things are. As an indicator of ecosystem health and resilience, biodiversity is key for sustaining oceans that face accelerating environment change."

"Extensive research has demonstrated that maintaining biodiversity promotes ocean health and service provision; therefore, monitoring the status and trends of marine diversity is important for effective ecosystem management. In the same way that a diversified portfolio stabilizes long-term financial health, ecosystem health and resilience are often enhanced by biodiversity," stated the authors of Envisioning.

Though coasts around the world are constantly changing, we still understand very little about the extent of the changes and their impact on the oceans.

New Zealand and the European Union created a regional marine biodiversity observation network and the Smithsonian Institution initiated the first worldwide network of coast field studies in 2012 to monitor the ocean's coastal ecosystems. But there is no cohesive worldwide network.

Paulay wants to change that and is help-

ing coordinate national efforts to monitor marine diversity and create awareness about the importance of taking stock of what we have in our oceans.

"From tiny phytoplankton and massive marine mammals to awe-inspiring sea dragons and ancient reefs, every element is important for healthy ecosystems," said Paulay. "The scale of change was driven home to me in Palau in 1998, during a survey soon after the 1998 Pacific-wide warming event."

"When we returned to sites that once had acre upon acre of vibrant staghorn and bottlebrush corals covering the bottom, we found but a desert of dead skeletons—mortality was virtually 100 percent," said Paulay.

Experts determined that a national marine biodiversity network could be established using existing technology within five years with the appropriate funding and collaboration, but the effort requires strong leadership to integrate all the necessary elements.

The study offers recommendations, including coordinating existing efforts, digitization of historical data including im-

mense museum collections and the establishment of regional centers to process and identify specimens.

"Right now it's a proposal that grew out of a meeting, a white paper. We are trying to create awareness and hope to reach more people," said Paulay.

His hope is to develop a marine biodiversity observation network, or MBON. The first priority would be to help identify threats to provide both an early warning system as well as data for forecasting models.

According to Envisioning, "Marine habitats and organisms are facing an unprecedented worldwide threat from climate change, pollution, overfishing, habitat destruction and invasive species."

"The scarcity of quantitative data on biological baselines in many parts of the ocean—including the current status of organisms and ecosystems and their trends over time—undermines our ability to respond effectively to these threats. Obtaining the essential data to do so would be advanced by establishing a coordinated MBON to allow proactive responses to such threats."

## EPA releases report on GHG emissions

By ROY LAUGHLIN

In 2011, U.S. greenhouse gas emissions dropped 1.6 percent compared to 1990 benchmark emissions.

According to the U.S. Environmental Protection Agency's annual greenhouse gas inventory report, "The Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2011," the country reduced its carbon dioxide emissions from power plants and improved automobile fuel efficiency. Weather variation that reduced fossil fuel use also contributed to the decline.

The EPA report noted that the U.S. has reduced its greenhouse gas emissions more than any other industrialized country and in so doing has dropped from the globe's largest CO2 emitter into second place behind China.

This year, the greenhouse gas inventory included a controversial conclusion about methane released by hydraulic fracturing. The EPA's tally included a 20 percent downward revision of methane release data for the years 1990-2010.

The EPA now reports a decrease averaging 41.6 million metric tons annually for these years. Total emissions for the two decades are an estimated 850 million metric tons.

The agency said the reduction occurred even as natural gas production increased 40 percent, primarily due to fracking, during the past two decades.

This conclusion in EPA's report is controversial. Natural gas producers have pushed for adoption of lower methane emissions for several years, saying that their operating procedures are improving and methane emissions are declining. The American Petroleum Institute regularly summarizes industry data and, this year, the EPA used the summary in its report.

But other experts have a developed a different analysis of methane release data, led by Robert Howarth, the David R. Atkinson Professor of Ecology and Environmental Biology at Cornell University.

His National Oceanic and Atmospheric Administration-funded study looked at the release of methane during natural gas extraction in Colorado and other Western

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The collage features several advertisements for environmental services and publications. At the top left is the cover of the Florida Specifier magazine, dated September 2008, with the tagline 'Practical Information For Environmental Professionals'. Below it are ads for Zebra Remediation, Environmental Professionals (listing services like soil sampling and groundwater monitoring), Groundwater Protection (offering auger, mud rotary, and sonic drilling), and Environmental Remediation Solutions (featuring Susan Bestian, P.E.). Other ads include SmithArc, Inc. for archaeological services, Gary A. Maier, P.E. for legal services, and URS, an environmental leader in Florida and around the world. The ads are arranged in a dynamic, overlapping layout.

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Sales strategy and shrinking budgets:

## How to stay afloat in Florida's professional service industry

By DANA POLLITT

**W**hile most government entities are tightening their belts and sitting on their wallets, Florida's professional service industry continues to look for new project and program opportunities to keep their valued employees busy.

Many of the historically robust capital improvement programs at the municipal, county, state and public school system levels have all but dried up. So what does a business do to stay whole?

Play it smart, market effectively and—most of all—work efficiently. Set goals and stand by them with concise targeted pursuits.

Often times, small, mid-size and even some multinational firms roll the dice, gambling on advertised requests for quotes, hoping—sometimes praying—that their submittal will be selected because their tender is better than the rest.

But let's face it, many of the purchasing and procurement divisions within local, regional and state government are seeing as many as 40, 60 and sometimes 80 responders to advertisements for professional services.

In order to compete in a market characterized by increased competition, ever shrinking marketing and proposal budgets

### ASR

From Page 14

put it into operation. That's exactly what happened."

The long period of testing is mandated by state and federal requirements. McLellan described it as a cycle test. First, you put water in; second, you store it; and then you recover it. The DEP requires a number of cycle tests as part of the permitting process to demonstrate that the system will function as designed.

The road to getting the ASR well online was delayed when EPA changed the drinking water standard for arsenic, dropping it from 50 parts per billion to 10 ppb.

The \$200,000 project was funded

### GHG

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states.

The study points to much greater methane releases than the EPA analysis does.

In response to an e-mail query, EPA said that the Howarth study did not provide new data on emissions from natural gas systems, but instead used available data sources, including EPA's new report, and applied their own method to recalculate emissions.

Even with the downward revisions, the EPA report shows that natural gas extraction and releases from gas lines in urban areas remain the primary source of U.S. methane emissions to the atmosphere, ahead of enteric fermentation and releases from landfills.

### SEA LEVELS

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meters per decade.

Mitchum's study tracked sea levels for 12 locations along the Gulf Coast and Atlantic Ocean from Galveston, TX, to Wilmington, NC, with seven of those in Florida. The per-decade rise in sea levels in Florida ranged from 1.5 centimeters in Cedar Key to 2.6 centimeters in St. Petersburg.

Other Florida locales checked were Pensacola, Naples, Key West, Miami Beach and Fernandina Beach.

Mitchum found that the rate of sea level increase was slightly higher along the Georgia and Carolina coasts than in Florida. He attributed that to the falling of land along the east coast as the land in the northern part of North America rebounds and rises.

With the specter of rising seas, long-range planning must include consideration for the protection of schools, hospitals, roads and vital infrastructure like sewer and water plants as well as emergency services.

and resource constraints, businesses have to market their services wisely.

One tip on responding to RFQs: If you are not already familiar with an opportunity before it hits your e-mail inbox, don't bother! A good motto to follow is "Fail to Prepare, Prepare to Fail."

When you are evaluating an opportunity, it is important to assess whether or not to dedicate your company's valuable time and often limited resources to responding to a proposal that's just hit the street.

Spare your resources and marketing dollars for an opportunity that is meant for you. While there may not be as many proposals being prepared by your marketing staff, there are still plenty of opportunities out there. Just be selective.

Help your company through a well-run capture plan. Get out in front of an opportunity; never chase one down.

Start now by building a network of reliable, competent and diligent teaming partners, sub-consultants and project managers. And most of all, get to know your prospective client, their needs and capital budgets.

*Dana Pollitt, managing member of Adept Strategists LLC in Ft. Lauderdale, is a business consultant to Florida's professional services marketplace. He can be reached at (954) 769-1533 or dana@adeptstrategists.com.*

through a grant from the Southwest Florida Water Management District. In recognition of the pioneering effort, officials at the district agreed to fund the entire cost. Normally it would have been a 50-50 proposition on funding.

### SEISMIC

From Page 13

by DOI.

Finally, the report's authors encourage the development of alternative energy resources, particularly offshore wind energy.

The report followed the release of a five-year DOI plan to allow federal waters surveys on the Atlantic and Gulf continental shelf.

The Eastern Gulf of Mexico could potentially be very significant economically and environmentally to Florida. According to DOI, the region across the peninsula, north of Cape Canaveral, is likely to have far less oil and gas potential.

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