Once again FANREP was well-represented at this year's EPAF and there were a number of excellent abstracts presented. Thank you to everyone who was able to make our annual meeting as well. I think improvements in communication was a key theme at the meeting, and is a major goal of mine as president.

**New Newsletter Format:**
Currently we are working on getting the newsletter up and running again on a regular basis. The plan is to do it a bit different than in the past by utilizing our FANREP district directors to help highlight success stories from within their districts. Keep an eye out as they may approach you about your programs. I can't think of an easier way to get another publication under your belt than by submitting an article to our newsletter.

Greetings FANREPers! Welcome to the 2011 fall edition of the Florida Association of Natural Resources Extension Professionals Newsletter. First and foremost, I want to remind you as a member of FANREP that this is your newsletter! It would not be possible without your contributions and support.

A big thanks goes out to Joan Bradshaw and the members of the newsletter committee (Holly Ann Abeels, John Linhoss, Emma Wilcox, Libby Carnahan, Shannon A McGee, Carrie Stevenson, and Derek Barber) who developed this excellent publication.

This newsletter is one method of highlighting some of the innovative work natural resource Extension professionals do across the state, region, country and beyond! We should be extremely proud of our accomplishments and impacts associated with our natural resource extension programming.

I feel privileged to be the President of an organization whose members are obviously dedicated to educating Florida's citizens and visitors on the importance of protecting and conserving Florida's precious natural resources. If you do not believe me, check out the long list of FANREP award winners at both the state and national level this year! Congratulations to all of the state and national winners! (see page 3 for details)
Message from FANREP President! (Continued)

**Updated FANREP Website:**
The FANREP website has been neglected for awhile, but we are working on updating its content. I have been in contact with IFAS communications about granting some of the officers access to the site so that we can make timely changes when needed. Lisa Krimsky, our Miami-Dade Sea Grant agent has volunteered to head our website committee, and I will work with her to continue to improve the quality of the site.

**Revised FANREP Policies and Procedures:**
A policy and procedures committee has been formed and is working hard to review and update the FANREP bylaws as well as work on a Policy and Procedures Manual to help facilitate the duties and responsibilities of our Executive Board members. Stay tuned as we will certainly share what is developed for the membership to review and comment on as well.

It goes without saying that we can’t be experts on all subjects, but the next best thing is knowing who to turn to when you don’t have the answer. If you have not done so already, I encourage you to get to know the other natural resource agents in your district as well as the specialists in your field so that you have a better idea of who has expertise in the various subject areas. This type of networking greatly enhances our ability to continue providing quality advice and programming.

Thank you again for all that you do, and I hope you have a very productive year. Don't forget to take some time for yourself and your families! Please don't hesitate to contact me if you have any comments or suggestions.

Sincerely,

Bryan Fluech
FANREP president

---

**Past President Thank You!**
I want to recognize and thank our past president Rebecca Jordi who has helped carry the FANREP torch over the past year. Her “fun” is not over though as she is now the chair of the 2012 EPAF committee, which we all know is no small task. I am sure she will do great, and wish her nothing but success in this endeavor.
Every year, natural resource faculty apply for state and national awards through FANREP and ANREP. To be eligible for awards, a member must have paid their dues prior to the start of the calendar year. In 2011, top notch applications resulted in 14 educational material awards and 6 program awards at the national level. Congratulations to all award winners!

ANREP Winners:

<table>
<thead>
<tr>
<th>Name</th>
<th>County</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexis Morris</td>
<td>Alachua County</td>
</tr>
<tr>
<td>Amy Richard</td>
<td>Alachua County</td>
</tr>
<tr>
<td>Ruth Francis-Floyd</td>
<td>Alachua County</td>
</tr>
<tr>
<td>Andrew Diller</td>
<td>Escambia County</td>
</tr>
<tr>
<td>Brooke Saari</td>
<td>Okaloosa County</td>
</tr>
<tr>
<td>Bryan Fluech</td>
<td>Collier County</td>
</tr>
<tr>
<td>Carolyn Saft</td>
<td>Suwannee County</td>
</tr>
<tr>
<td>Carrie Stevenson</td>
<td>Escambia County</td>
</tr>
<tr>
<td>Christina Verlinde</td>
<td>Santa Rosa County</td>
</tr>
<tr>
<td>Dorothy Lee</td>
<td>Escambia County</td>
</tr>
<tr>
<td>Emma Willcox</td>
<td>Levy County</td>
</tr>
<tr>
<td>Holy Abeels</td>
<td>Brevard County</td>
</tr>
<tr>
<td>John Linhoss</td>
<td>Marion County</td>
</tr>
<tr>
<td>JP Gellermann</td>
<td>Sarasota County</td>
</tr>
<tr>
<td>Karen Miliffe</td>
<td>Osceola County</td>
</tr>
<tr>
<td>Kendra Zamojski</td>
<td>Walton County</td>
</tr>
<tr>
<td>Lindsey McConnell</td>
<td>Alachua County</td>
</tr>
<tr>
<td>Lisa Krimsky</td>
<td>Miami-Dade County</td>
</tr>
<tr>
<td>Lynn Barber</td>
<td>Hillsborough County</td>
</tr>
<tr>
<td>Maia McGuire</td>
<td>Flagler County</td>
</tr>
<tr>
<td>Maria Carver</td>
<td>Hillsborough County</td>
</tr>
<tr>
<td>Mark Hostetler</td>
<td>Alachua County</td>
</tr>
<tr>
<td>Martha Monroe</td>
<td>Alachua County</td>
</tr>
<tr>
<td>Marty Main</td>
<td>Collier County</td>
</tr>
<tr>
<td>Melanie Taylor</td>
<td>Gulf County</td>
</tr>
<tr>
<td>Monica McGarrity</td>
<td>Hillsborough County</td>
</tr>
<tr>
<td>Nancy Peterson</td>
<td>Alachua County</td>
</tr>
<tr>
<td>Pamella Allen</td>
<td>Escambia County</td>
</tr>
<tr>
<td>Pete Vergot</td>
<td>Gadsden County</td>
</tr>
<tr>
<td>Ruth Francis-Floyd</td>
<td>Alachua County</td>
</tr>
<tr>
<td>Scott Jackson</td>
<td>Wakulla County</td>
</tr>
<tr>
<td>Stacia Hetrick</td>
<td>Osceola County</td>
</tr>
<tr>
<td>Steve Johnson</td>
<td>Hillsborough County</td>
</tr>
<tr>
<td>Theresa Friday</td>
<td>Hillsborough County</td>
</tr>
</tbody>
</table>

Distinguished Service Awards

Friends of Extension:
Pinellas Chapter Florida
Native Plant Society

Early Career Leadership: Lisa Krimsky (Miami-Dade County)

Career Leadership: Andrew Diller (Escambia County)

Thank you to all who applied and congratulations to all our winners. Your applications and awards continue to make FANREP proud!
Woody Biomass for Energy in Florida

Biomass, and particularly woody biomass, is getting a lot of attention as an energy resource, but there are potential environmental and social challenges. University of Florida Extension developed a regional resource and training program to help forestry, energy, and community leaders work together to share information about woody biomass for energy. This included conducting 26 economic analyses, producing 16 fact sheets, and developing a community forum protocol.

In Gainesville, Florida Extension ran seven community forums where the public could ask questions of a panel of experts and submit their opinions on a survey – what they would be willing to approve and what features they felt most strongly about. Extension assembled the responses and wrote a report to the city commission, reporting that people didn’t mind using trees if they knew they were being grown and harvested sustainably. The city commission passed a regulation on sustainable forest resources, then approved a bid to build a woody biomass facility. Woody biomass facilities have been created in Oklahoma and Idaho using this program as a model for their outreach efforts.

Contact: Dr. Martha Monroe, Professor and Extension Specialist
phone: 352-846-0878
email: mcmonroe@ufl.edu

Recreational Scalloping Enhanced Through Webinars

Rural coastal county economies of the Big Bend thrive on recreational fishing activities. In Taylor County alone, a recent study by Florida Sea Grant estimated more than a $10 million economic impact from the county’s 12 boat access facilities, with scalloping reported as a top activity, second only to fishing. To provide Floridians with practical information about recreational scalloping along the Gulf coast, webinars have been used as an efficient and cost-effective way to reach hundreds of potential scallopers. Before the season began this year, three live webinars (two mid-day and one evening) focused on harvest regulations, boating safety, safe seafood handling practices, scalloping techniques, scalloping locations, species biology and the state’s scallop population monitoring program.

An average of 20 people participated in the live sessions, but more than 400 individuals watched the recording during the extended scallop season. Participants came from varied backgrounds and locations within and outside of Florida. Results indicated 94% of those surveyed would share the information learned, with 79% finding the webinar technology a convenient way of learning new information. Webinars have proven to be an efficient and cost-effective way to promote safe, family-oriented activities and good seafood harvest and handling practices, and to stimulate local businesses through increased tourism.

Contact: Dr. Fred Vose
Taylor County Extension.
203 Forest Park Dr, Perry, FL 32348
Phone: (850) 838-3508
Email: fvose@ufl.edu
For more than three decades, Florida Sea Grant has contributed to the evolution of the state’s reef-building community through research, scientific conferences and outreach activities. Many of its coastal county-based extension faculty are involved in some activity related to artificial reefs. Artificial reefs are used for a number of activities, among them: enhancing recreational and charter fishing and diving, boosting reef fish populations and aiding scientific research.

Florida’s artificial reef program, created in 1982, includes more than 2,500 documented artificial reefs in the state’s coastal waters. About one-third of them were the subject of the recent economic study.

A new Florida Sea Grant study of artificial reef use in six Southwest Florida counties shows the structures lure a lot more than fish. The reefs, which provide habitat for popular sport fish and other marine life, pulled more than $253 million into the region during one year, the study found. Though it costs nothing more than a saltwater fishing license to use the submerged structures as a fishing spot, anglers spend money on food, lodging, fuel, tackle and other necessities.

The UF and Florida Sea Grant study, Economic Impacts of Artificial Reefs for Six Southwest Florida Counties, looked at money generated by artificial reefs in Pinellas, Hillsborough, Manatee, Sarasota, Charlotte and Lee counties in 2009. Researchers found that $136 million came from residents, while $117 million was spent by visitors. Dr. Bob Swett, UF associate professor and Florida Sea Grant extension specialist who led the study, said he was struck most by the contrast between the income generated and the small amount counties invest in the reefs — ranging from $20,000 to $60,000 a year for each county, with some years requiring little to no spending. The reefs also enjoy private support, such as local marine contractors who donate materials and in-kind labor. Besides asking residents about their reef-related spending, the UF researchers also asked boaters who use reefs and those who do not their opinions about spending public money to build and maintain the structures, which are typically underwater piles of large, hollow concrete blocks where fish can hide. Eighty-three percent to 95% of users were likely to support spending county funds on reef related projects.

Other survey highlights indicate that on average, more than 5,600 southwest Florida residents use artificial reefs every day. For-hire fishing enterprises, including fishing guides, charter boats and party boats, accounted for nearly $90 million in spending, and artificial reefs support more than 2,500 full- and part-time jobs.

For more information, contact Bob Swett at (352) 392-6241 or email at: rswett@ufl.edu.
ECONOMIC IMPACTS OF ARTIFICIAL REEFS
Southwest Florida

These are findings from a recent study of economic benefits associated with artificial reef programs in a six-county region of Southwest Florida (Pinellas, Hillsborough, Manatee, Sarasota, Charlotte and Lee counties). The full report, Economic Impacts of Artificial Reefs for Six Southwest Florida Counties, TP 174, is available from Florida Sea Grant, fsgart.org.

At a glance:
- The results from a recent survey of the economic impact of artificial reefs show extensive use of the Southwest Florida artificial reef systems by residents, visitors, private boaters and for-hire clients.
- On a daily basis, an average of more than 5,600 persons in Southwest Florida — residents and visitors included — use artificial reefs.
- Fishermen and divers who use Southwest Florida’s artificial reefs sites spend over $253 million in the region annually.
- Survey results documented that artificial reefs help support the for-hire fishing sector (guides, charter and party boats) with clients spending nearly $90 million on artificial reef-related trips.
- Expenditures on artificial reef-related activities generated almost $227 million in economic outputs that supported over 2,560 full- and part-time jobs.
- Visitors bring new money into local economies ($117.58 million), accounting for almost half of artificial reef expenditures.

Public Support for Artificial Reefs
In general, what is your opinion regarding the use of public funds to provide and maintain artificial reefs for recreation in Florida’s waters?

<table>
<thead>
<tr>
<th>County</th>
<th>Non-Reef Users</th>
<th>Reef Users</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Oppose</td>
<td>Neutral</td>
</tr>
<tr>
<td>Pinellas</td>
<td>3%</td>
<td>26%</td>
</tr>
<tr>
<td>Hillsborough</td>
<td>3%</td>
<td>31%</td>
</tr>
<tr>
<td>Manatee</td>
<td>7%</td>
<td>52%</td>
</tr>
<tr>
<td>Sarasota</td>
<td>5%</td>
<td>27%</td>
</tr>
<tr>
<td>Charlotte</td>
<td>7%</td>
<td>30%</td>
</tr>
<tr>
<td>Lee</td>
<td>7%</td>
<td>24%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>County</th>
<th>Economic Output</th>
<th>Total Income</th>
<th>Business Taxes</th>
<th>Full/Part-time Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pinellas</td>
<td>$226.93</td>
<td>$121.72</td>
<td>$16.60</td>
<td>2,595</td>
</tr>
<tr>
<td>Hillsborough</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manatee</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarasota</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charlotte</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lee</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- OR -

<table>
<thead>
<tr>
<th>County</th>
<th>Economic Output</th>
<th>Total Income</th>
<th>Business Taxes</th>
<th>Full/Part-time Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pinellas</td>
<td>$135.77</td>
<td>$117.58</td>
<td>$163.61</td>
<td>$89.74</td>
</tr>
<tr>
<td>Hillsborough</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manatee</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarasota</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charlotte</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lee</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The study was conducted by Florida Sea Grant and University of Florida researchers with funding provided by the U.S. Fish and Wildlife Service Federal Aid in Sport Fish Restoration Program through a grant to the Florida Fish and Wildlife Conservation Commission, Inc. West Coast Inland Navigation District, and by participating counties. Information was collected using a variety of survey techniques that asked private boater and for-hire operators and clients about their artificial reef use during 2009. For more information, contact Bob Swett, Florida Sea Grant Extension, (850) 352-6223, mswett@ufl.edu.

©2006 FSEF 136
Since 1994, the University of Florida has been promoting the use of barn owls for sustainable rodent control. As a result, the Everglades Agricultural Area has some of the highest barn owl densities on earth.

Many agricultural producers in the Everglades have dramatically reduced their reliance on chemical rodenticides. One sugarcane grower reported that he had totally eliminated his use of rodenticides, which had traditionally ranged from 4-8 tons per year, and actually suffered less rodent damage to his crops.

Owl pellets from the program are used by teachers and students to learn predator/prey relationships and mammalian anatomy.

Contact: Dr. Richard Raid
Everglades Research and Education Center
3200 E Palm Beach Rd. Belle Glade, FL 33430
Phone: (561) 993-1564
Email: rnraid@ufl.edu

---

University of Florida, IFAS, Pinellas County Extension developed a Community Energy Education Program that focuses on assisting residents make meaningful changes in their home energy usage.

The program led to an overall reduction in community energy demand, reaching over 17,000 light bulbs.

This represented a savings of $5 million in energy costs, reduction of energy use by 35 million kWh, air pollution savings equivalent to the removal of four thousand cars from the road for a year, acres of forest, and reduction of 24 thousand tons of CO2 emissions.

Ramona Madhosingh-Hector
Urban Sustainability Agent
Pinellas County Extension Services
Phone: 727-582-2656
Email: rmadhosingh-hector@pinellascounty.org
REGIONAL PROGRAM SHOWCASE: 
NEW HYDRILLA PROJECT FUNDED

The first line of a press release for the Hydrilla Integrated Pest Management Risk Avoidance and Mitigation Project (Hydrilla IPM RAMP) project reads “Attention Sportsmen! Whether you are a hydrilla fan or are tired of unwinding the stuff from your prop, this story is for you!”

Although there are a lot of sportsmen in the UF/IFAS crowd, the audience for this article and the purpose is a little different. As Extension faculty and specialists, we all want to work on collaborative projects that are well-funded and cutting edge. Well…this article spotlights such a project. While the Hydrilla project is less than a year old, there is significant data to report at this time, but it sets the ground work for what will potentially be a be a model top-tier UF/IFAS Extension program.

In January 2011, the University of Florida (UF)/IFAS Entomology and Nematology Department obtained a 4-year, $500k grant from the USDA National Institute of Food and Agriculture (NIFA). UF/IFAS research and extension faculty, FAMU faculty and an ARMY Corps Scientist will tackle one of the U.S.’s most troublesome invasive plants – hydrilla.

Hydrilla verticillata (a.k.a. hydrilla) is an invasive freshwater plant common in Florida. It was brought to the Tampa and Miami areas as an aquarium plant in the late 1950s. By the 1970s, it was established throughout Florida.

If left unmanaged, hydrilla is capable of creating damaging infestations which can choke out native plants, clog flood control structures, and impede waterway navigation, recreational boating, fishing and hunting. In addition, hydrilla is showing resistance to fluridone, a systemic herbicide used to manage it for the past 20 years.

According to the UF/IFAS Center for Aquatic and Invasive Plants, millions of dollars are spent each year on herbicides and mechanical harvesters in Florida in an effort to place hydrilla under “maintenance control.” Because hydrilla can provide food and shelter for some wildlife species such as bass and certain ducks, the goal of this program is to manage hydrilla, not eradicate the weed.

(Continue on page 9)
The NIFA funding will enable the team to study new chemical and biological control methods as part of an overall hydrilla integrated pest management (IPM) plan. The partnership of researchers will be studying the impacts of the integrated use of a new herbicide, a naturalized hydrilla mining midge (a type of insect) and a native fungus that is a hydrilla pathogen. All of these options will change how hydrilla grows and will create more favorable boating, hunting and fishing areas on lakes that have become almost unusable because of the dense hydrilla growth.

**Research/Extension Team**

James P. Cuda  
UF/IFAS Entomology & Nematology Depart.  
Phone: 352-273-3921  
Email: jcuda@ufl.edu

Jennifer L. Gillett-Kaufman,  
UF/IFAS Entomology & Nematology Depart.  
Phone: 352-273-3950  
Email: gillett@ufl.edu

Ken Gioeli  
UF/IFAS St Lucie County Extension  
Phone: 772-462-1660  
Email: ktgiolei@ufl.edu

Stacia Hetrick,  
UF/IFAS Osceola County Extension  
Phone: 321-697-3000  
Email: shet@osceola.org.

Joan P. Bradshaw,  
UF/IFAS Citrus County Extension  
Phone: 352-527-5714  
Email: jpbradsh@ufl.edu

Raymond L. Hix  
Florida A&M University  
Phone: 850-561-2216  
Email: raymond.hix@famu.edu

William A. Overholt  
UF/IFAS Indian River Research and Education Center  
Phone: 772-468-3922 x 143  
Email: billover@ufl.edu

Judy F. Shearer  
U.S. Army Corps of Engineers Research and Development Center  
Vicksburg, Mississippi  
Phone: 601-634-2516  
Email: Judy.F.Shearer@erdc.usace.army.mil

If you are interested in more information about aquatic and invasive plants, visit the UF/IFAS Center for Aquatic and Invasive Plants website (http://plants.ifas.ufl.edu/), or the Osceola County Hydrilla and Hygrophila Demonstration Project Website (http://plants.ifas.ufl.edu/osceola/).

For additional information about the Hydrilla IPM RAMP Project, please contact one of your colleagues listed above or visit http://entomology.ifas.ufl.edu/hydrilla/.
Legislative Updates:
Federal Water Quality Standards Considered for the State of Florida

Clean water is vital to Florida’s economy. Jobs depend on it. Algae blooms—the thick, green muck that fouls clear water—can produce toxins harmful to humans, animals and ecosystems across the state of Florida. According to the Florida Department of Environmental Protection’s list of impaired waters, about 1,918 miles of rivers and streams are currently impaired for nutrients. The number of miles grew from approximately 1000 miles in 2008 to approximately 1900 miles in 2010. Impaired acres of lakes increased from 350,000 acres in 2008 to 378,000 in 2010.

Although Florida has made intensive efforts to diagnose and control nutrients in the state, significant nitrogen and phosphorus pollution persists. Hydrological modifications, intensive agricultural production, population growth and associated urban and suburban development, all increase runoff and result in nutrient impacts.

The State of Florida has initiated rulemaking to adopt quantitative nutrient water quality standards to facilitate the assessment of designated use attainment for its waters and to provide a better means to protect state waters from the adverse effects of nutrient over enrichment. The addition of excess nutrients, often associated with human alterations to watersheds, can negatively impact waterbody health and interfere with designated uses of waters - by causing noxious tastes and odors in drinking water, producing algal blooms and excessive aquatic weeds in swimming and boating waters, and altering the natural community of flora and fauna.

The Florida Department of Environmental Protection (FDEP) plans to develop numeric criteria for causal variables (phosphorus and nitrogen) and/or response variables (potentially chlorophyll a and transparency), recognizing the hydrologic variability (waterbody type) and spatial variability (location within Florida) of the nutrient levels of the state’s waters, and the variability in ecosystem response to nutrient concentrations. FDEP’s preferred approach is to develop cause/effect relationships between nutrients and valued ecological attributes, and to establish nutrient criteria that ensure that the designated uses of Florida’s waters are maintained.

FDEP is requesting written public comments/concerns on the Department’s proposed nutrient standards, including letters etc., to http://www.dep.state.fl.us/water/wqssp/nutrients/
Florida currently uses a narrative nutrient standard to guide the management and protection of its waters. Chapter 62-302.530, Florida Administrative Code (FAC), states that “in no case shall nutrient concentrations of body of water be altered so as to cause an imbalance in natural populations of flora or fauna.” The narrative criteria also states that (for all waters of the state) “the discharge of nutrients shall continue to be limited as needed to prevent violations of other standards contained in this chapter [Chapter 62-302, FAC]. Man-induced nutrient enrichment (total nitrogen or total phosphorus) shall be considered degradation in relation to the provisions of Sections 62-302.300, 62-302.700, and 62-4.242, F.A.C.”

FDEP has relied on this narrative for many years because nutrients are unlike any other “pollutant” regulated by the federal Clean Water Act (CWA). Most water quality criteria are based on a toxicity threshold, evidenced by a dose-response relationship, where higher concentrations can be demonstrated to be harmful, and acceptable concentrations can be established at a level below which adverse responses are elicited (usually in laboratory toxicity tests). In contrast, nutrients are not only present naturally in aquatic systems, they are absolutely necessary for the proper functioning of biological communities, and are sometimes moderated in their expression by many natural factors.

The FDEP has been actively working with EPA on the development of numeric nutrient criteria for several years. FDEP submitted its initial DRAFT Numeric Nutrient Criteria Development Plan to EPA Region IV in May 2002, and received mutual agreement on the Numeric Nutrient Criteria Development Plan from EPA on July 7, 2004. The FDEP revised its plan in Sept. 2007 to more accurately reflect its evolved strategy and technical approach, and FDEP received mutual agreement on the 2007 revisions from EPA on September 28, 2007. On January 14, 2009, EPA formally determined that numeric nutrient criteria should be established on an expedited schedule. On March 3, 2009 FDEP submitted its Current Numeric Nutrient Criteria Development Plan to EPA Region IV. This revised plan reflects DEP’s current approaches and expedited schedule.

To limit nutrient enrichment, Florida is developing nutrient criteria for all waters, guided by recommendations from technical experts from throughout the state. This advisory committee will review all available technical information to ensure that the resulting criteria reflect the characteristics and aquatic life use of Florida’s diverse waters.

DEP intends to use electronic mail, as well as this website, to distribute information on the direction and status of numeric nutrient criteria development for Florida’s waterbodies. To be added to the Department’s Nutrient Criteria mailing list, please contact DEP’s Nutrient Criteria Development Coordinator, Ken Weaver at kenneth.weaver@dep.state.fl.us

To assist Extension faculty better understand this complex issue, UF-IFAS developed an EDIS publication: SL316 “A Guide to EPA's Proposed Numeric Nutrient Water Quality Criteria for Florida.”
Dr. Bill Giuliano is an Associate Professor and Wildlife Extension Specialist in the Department of Wildlife Ecology and Conservation at the University of Florida. As a Wildlife Extension Specialist Bill works on a variety of wildlife resource issues. The goal of his extension program is to make relevant, science-based knowledge and expertise in wildlife science, necessary to sustain and enhance the quality of human life and the conservation of natural resources, accessible to the public via non-formal educational programs.

Drawing from his applied research program, as well as those of his colleagues, Bill provides leadership and coordination for wildlife extension efforts in two broad program areas.

The first program area focuses on integrating wildlife management and other land uses and provides information and outreach to improve agricultural lands and other land types for wildlife. It also demonstrates, through a range of extension activities how wildlife and their management can be incorporated to economically sustain and improve agricultural and other land uses. The objectives of this program area are to increase awareness and educate policy makers, landowners and managers, and other members of the general public on the benefits and approaches to integrate wildlife management and other land uses, and to increase the amount of land where wildlife management and other land uses are integrated.

The second program area seeks to advance the public’s understanding of wildlife ecology and conservation, the objectives being to increase the number of people that understand wildlife ecology, are aware of wildlife issues, and support proper management and conservation.

Bill’s programs are cooperative in nature and integrate science-based information and outreach in demonstration areas, publications, videos and multimedia presentations, websites, seminars, workshops, field days, site visits, and in-service trainings to facilitate information transfer to the public. Bill partners with numerous agencies and organizations, including the Florida Fish and Wildlife Conservation Commission, United States Department of Agriculture, United States Fish and Wildlife Service, and National Wild Turkey Federation, to successfully implement his extension programs.
Shannon McGee is a new Natural Resources Extension Agent in Polk County and has been with University of Florida since December 2010. Shannon received her Bachelor of Science degree in Forest Resource Management at UF’s School of Forest Resources and Conservation (SFRC) in 2009.

While in school and after graduation, Shannon was a research assistant for several professors. Her research positions ranged from designing a management plan for a university forest, designing a museum display for UF research in St. Augustine, and project manager for a PhD project in Osceola National Forest.

When her major professor retired and the research assistant job ended, Shannon found the posting for the Polk County Natural Resources position.

Now in Polk County, Shannon is initiating natural resource and water education with a focus on the “big picture”. Based on her experience with forestry, Shannon is teaching ecosystem management rather than parcel management.

Shannon is educating Polk County residents about local lake and neighborhood and how their actions affects the entire watershed. She also plans to focus on wildlife and upland ecosystem education, invasive species, and use of natural resources to generate income. Her ultimate goal is to broaden the education in the county as it relates to natural resources.

Shannon is enthusiastic about the variety of challenges associated with her new position. She enjoys researching topics when she obtains questions from constituents. She used EDIS publications while doing research in school and continues to use that resource in all aspects of her job.

Shannon has developed a new website which showcases her work in Polk County. To learn more about her programs, visit http://polk.ifas.ufl.edu/NR/index.shtml

If you have questions for Shannon, contact her at 863-519-8677 x102 or smcgee@ufl.edu

Welcome
Shannon McGee
Several large, non-native lizards and snakes are now breeding in central and southern Florida. Some of these species, such as the Nile Monitor lizard and Burmese Python are dangerous carnivores and are probably harming our native ecosystem. Other species, including the Anacondas, have been found in Florida but aren’t established and breeding... yet.

Early detection and rapid response networks are the key to preventing new species from being introduced and keeping established invaders from spreading to new areas. REDDy is a free, online course that will teach you how to recognize and report large, invasive reptiles. REDDy-trained observers play a key role in a much larger management program by helping to detect and document the spread of established species and sightings of new species. Anyone who spends time driving, working outdoors, or enjoying the outdoors will benefit from this training, as will anyone who lives in southern or central Florida.

Contact: Steve A. Johnson, Ph.D.
Assistant Professor, University of Florida/IFAS
Dept. of Wildlife Ecology & Conservation
110 Newins-Ziegler Hall, PO Box 110430, Gainesville, FL 32611
Office: 813-757-2273
Email: tadpole@ufl.edu

The Florida Natural Areas Inventory is now offering a online version of their Field Guide to the Rare Plants and Animals of Florida. This field guide presents detailed descriptions, photographs, drawings, maps, habitat information, and management guidelines for more than 200 rare plant species and 150 rare animal species. Not all species tracked by the Inventory are included in the Field Guide. The Inventory tracks more than 1,000 rare plant and animal species.

The same information in this online Field Guide is available in hardcopy form as two separate books, one for animals and one for plants. The Field Guides provide the species accounts in 3-ring binders convenient for rearranging species accounts to customize the Guide for individual use. To order your copy, contact Dorothy Gochnauer at the Florida Natural Areas Inventory at (850) 224-8207.
November 1-4: 38th Annual Natural Areas Conference: 
http://www.naturalarea.org/11conference/

November 1: Water Choices IV Public-Private Solutions to Water Challenges: 
Website: http://www.floridaearth.org/

November 3: Longleaf Pine Reforestation & Restoration Field Day, 8:30 am - 3:30 pm, Ironwood Preserve Lodge, Suwannee County, FL. $10 fee covers lunch and materials. Approved for 2 SAF CFEs. To register, Call Vanessa Smart at (386) 362-5551.

November 3: Cogongrass Workshop, 8:30 am -5 pm ET, Florida State University Conference Center, Tallahassee, FL. http://www.naturalarea.org/11conference

November 8-9: School of Forest Resources & Conservation / Society of American Foresters: http://fallsymposiumuf.eventbrite.com/


November 28: Integrating Land & Wildlife Management: Quail and Timber, 5:30 - 7:30 pm Levy County Extension. Call (352) 486-5131.

### UF-IFAS PDEC Training Summary

<table>
<thead>
<tr>
<th>In-service #</th>
<th>In-service Training Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>30465</td>
<td>Creating Oyster Reef Habitat to Enhance Water Quality, Biodiversity, and Shoreline Protection</td>
<td>01/26/2012</td>
</tr>
<tr>
<td>30524</td>
<td>Creating Backyard Wildlife Habitat</td>
<td>01/30/2012</td>
</tr>
<tr>
<td>30270</td>
<td>Bio Fuels and Farm-based Bio Energy Conversions; In-Service Training and Workshop</td>
<td>02/23/2012</td>
</tr>
<tr>
<td>30446</td>
<td>The second generation of best management practices (BMPs) for crop production (I)</td>
<td>02/29/2012</td>
</tr>
<tr>
<td>30470</td>
<td>Pesticide Selection for Turf and Ornamentals: The Real World of Resistance</td>
<td>03/20/2012</td>
</tr>
<tr>
<td>30480</td>
<td>The 2012 Florida-Friendly LandscapingTM/Florida Yards and Neighborhoods In-service Training</td>
<td>04/19/2012</td>
</tr>
<tr>
<td>30386</td>
<td>2012 Florida Friendly Landscaping Green Industries Best Management Practices In-Service Training</td>
<td>04/20/2012</td>
</tr>
<tr>
<td>30451</td>
<td>Numeric Nutrient Criteria for Florida’s waters: status and updates</td>
<td>05/01/2012</td>
</tr>
<tr>
<td>30453</td>
<td>Aquaculture and Market Distribution of Marine Baitfish</td>
<td>05/08/2012</td>
</tr>
<tr>
<td>30468</td>
<td>Farm to Fork 2: Building Local Food Systems</td>
<td>05/14/2012</td>
</tr>
<tr>
<td>30420</td>
<td>Design and Implementation of Teaching Arboretum and FFL Demonstration Gardens for Extension and REC Programs.</td>
<td>05/23/2012</td>
</tr>
</tbody>
</table>

### 8th Natural Resource Extension Professionals Conference

**Natural Resources Programs and Partnerships at Work**  
Association of Natural Resource Extension Professionals  
8th Biennial Conference  
Sunday May 20 – Wednesday May 23, 2012  
Kanuga Conference Center  
Hendersonville, North Carolina

ANREP conferences offer abundant opportunities for professional growth and development. Presentations, field tours, workshops, poster displays and informal networking provide a variety of options for skill building, knowledge sharing, collaboration and idea generation in a welcoming atmosphere. The setting for this year’s conference is the scenic and historic Blue Ridge Mountains of North Carolina.

For more information visit [http://www.anrep.org/conferences/2012](http://www.anrep.org/conferences/2012)
Membership and Renewal Application

Name: ________________________________________________________________
Title: __________________________________________________________________
Address: __________________________________________________________________
City: ___________________________ State: ___________ Zip: ________________
Phone: ( ) ___________ Fax: ( ) ___________
District (circle one): NW NE Central S. Central South
E-mail: __________________________________________________________________
Check One:
___ University Faculty Member ___ Affiliate Membership (Non-faculty Member)

*For Affiliate Members Only, which FANREP Member is Sponsoring You? ______________

Discipline Areas: Please check all that apply

___ Soils & Land Use  ___ Watershed Management  ___ Environmental Ed
___ Fisheries / Marine  ___ Forestry  ___ Range Management
___ Recreation  ___ Water Resources  ___ Wildlife Management
___ Wood Products  ___ Youth Development  ___ Energy
___ Pest Management  ___ Florida Friendly Landscaping
___ Natural Resources  ___ Other: ___________________________________________

2012 Active Membership

___ $80 (Includes $45 National ANREP Annual Dues / $35 State Chapter Annual Dues)
___ $200 Life Membership (FANREP only, ANREP life membership dues should be paid directly
to ANREP). See FANREP bylaws for eligibility. This is a one-time membership fee.
___ New UF / IFAS Faculty Member - State Chapter Dues Waived. Must be employed by UF /
   IFAS after January 1, 2011 to qualify. Please enter employment date:

Please make checks payable to Association of Natural Resources
   Extension Professionals and return to:
   Marina D’Abreu
   Manatee County Extension
   1303 17th St W
   Palmetto, FL 34221

TO QUALIFY FOR THE FANREP AWARDS PROGRAM,
FANREP MEMBERSHIP DUES MUST BE
PAID BY JAN 1, 2012.
**FANREP** is a statewide association for Cooperative Extension Service (CES) professionals working in environmental education, fisheries, forestry, wood sciences, Florida Friendly Landscaping (FFL), waste management, water, wildlife, community development and related disciplines. The main objectives of FANREP are:

- Bring Extension professionals together to discuss mutual natural resource issues, needs, and opportunities.
- Advance natural resource Extension through continuing education for Extension professionals.
- Promote cooperation among states and regions, agencies, associations, and businesses on natural resource education programs.
- Develop, sponsor, and promote education and training programs that advance natural resource management.
- Strengthen communication with Extension administrators.

---

**Board Members**

- **President**: Bryan Fluech
- **President Elect**: Stephen Gaul
- **Secretary**: Lynn Barber
- **Treasurer**: Annemarie Post
- **Past President**: Rebecca Jordi

**District Directors**

- **District 1 (Northwest)**: Carrie Stevenson
- **District 2 (Northeast)**: Fred Vose
- **District 3 (Central)**: Jessica Sullivan
- **District 4 (South Central)**: Robert Kluson
- **District 5 (South)**: Lisa Krimsky

---

**Committee**

- Scholarship: Marina D’abreau
- Newsletter: Joan Bradshaw
- Awards: Robert Kluson
- Abstract: Joy Hazell, Lisa Krimsky, Brooke Saari
- Membership: Marina D’abreau

---

**District Directors**

- **District 1 (Northwest)**: Carrie Stevenson
- **District 2 (Northeast)**: Fred Vose
- **District 3 (Central)**: Jessica Sullivan
- **District 4 (South Central)**: Robert Kluson
- **District 5 (South)**: Lisa Krimsky

---

**Committee**

- Scholarship: Marina D’abreau
- Newsletter: Joan Bradshaw
- Awards: Robert Kluson
- Abstract: Joy Hazell, Lisa Krimsky, Brooke Saari
- Membership: Marina D’abreau