

aqua-notes

An Equal Opportunity Institution

SOLUTIONS

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150 Sawgrass Road
Bunnell, FL 32110
386-437-7464

May, 2014

Mark your calendars...

- May 3—St Johns County 4-H Youth Expo (St Johns Co Fairgrounds) 10 am—3 pm. Free admission. Call 904-209-2430 for more information.
- More on back page!

Celebrating 100 years of Extension...

Join us as we celebrate the 100th anniversary of the Smith-Lever Act, which established the Cooperative Extension Service. Extension allows us all to benefit from the research and education of our land-grant universities. If you've learned how to produce crops more efficiently, choose healthier foods, conserve water, save money or start a butterfly garden, chances are you learned it from Extension.



A CENTURY OF SERVING FLORIDA

We're proud of our 100 years of service to the people of Florida, and we look forward to providing solutions for your life for 100 more! The Flagler County Extension office (150 Sawgrass Road, Bunnell, FL 32110) will be holding a celebration on May 31 from 10 am-noon. Highlights include plant sales, garden tours, educational exhibits and door prizes. Hope to see you there!

M. P. McGuire

Maia McGuire, PhD
Marine Extension Agent

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Look for Sea Grant Extension on YouTube

You can find videos of me talking about climate change, my adult day camp (titled "From the ocean to the river") and plastic pollution on the Central Extension District's YouTube channel (<https://www.youtube.com/user/IFASCDistrict> —click on Playlists, then Environment). There's also a great video profiling our manatee education program at Florida Sea Grant's YouTube channel (<https://www.youtube.com/user/flseagrants/videos>). Look for "Manatee Field Trip to Blue Spring State Park." While you are at the YouTube channels, explore the sites to see what other cool things Florida Extension and Florida Sea Grant are up to! Also remember that you can "like" the northeast Florida Sea Grant Extension program on Facebook (<https://www.facebook.com/NEFLSeaGrant>).



Protecting and conserving water

The University of Florida's Center for Public Issues Education recently surveyed over 500 Floridians for their opinions of water quality and quantity (www.centerpie.com/water/). This is the second year that the Center has conducted this survey. The results show that Floridians have a high level of concern about the future availability of fresh water. Most people surveyed (70%) expressed a willingness to conserve water, and a little over half had water-efficient toilets or low-flow showerheads in their homes. A little under half of the people surveyed felt that water quality (in lakes, rivers and the ocean) is declining. About the same proportion expressed an unwillingness to limit watering their lawn if it meant the grass would die.

According to US Census data, Florida's population has almost quadrupled since 1960. The amount of water available on the planet is constant. Per capita public water supply use in Florida increased in the last quarter of the 20th century, but has decreased since 2000. The US Geological Survey estimates that Florida's per capita water consumption was about 134 gallons/person/day in 2010. This is comparable to water use rates from 1955. Although per capita water use is decreasing, because of increasing population Florida's total fresh water withdrawals more than doubled between 1970 and 2005. Public supply water use is predicted to surpass agricultural water use by 2015.

Saltwater intrusion into aquifers used for drinking water and for irrigation is a growing concern. This increased penetration of sea water into fresh water sources is probably due to a combination of greater fresh water withdrawals and rising sea levels. Rising sea levels are causing stormwater drainage problems in many areas of Florida, resulting in localized flooding during heavy rains or extreme high tides.

Stormwater pollution, also referred to as nonpoint source pollution, can contribute to declining water quality in surface and groundwater sources. Springs, rivers, estuaries and coastal waters are all facing environmental challenges related to decreased freshwater flow (increased withdrawals) and introduction of pollutants. Changing climate may be causing range expansion of both native and invasive plants and animals.

Sometimes it seems overwhelming. There are so many issues related to water supply and water quality, human and environmental health. Yet for many of these issues, there are simple, inexpensive (or even cost-saving) steps that we can all take to play a part in reducing our personal environmental impact. You can start by estimating your household water consumption at floridaswater.com/waterconservation/survey.html. You will also learn water conservation tips at this site. Look for Florida Friendly Landscaping workshops at your local Extension Office to learn how to modify your landscape to help conserve water, how and when to apply fertilizers and pesticides, etc. Read labels of personal care products and avoid purchasing products containing polyethylene (plastic) and triclosan (anti-bacterial). Dispose of unused products and containers properly—not everything is safe to pour down the drain or send to the landfill.



Right whales and entanglement

It might be difficult to imagine how a 50-foot long whale could be harmed by a piece of rope, but entanglement is one of the primary threats to the critically endangered North Atlantic right whale (NARW). Researchers with the New England Aquarium (which maintains the NARW catalog—an inventory of all known individual whales) estimate that 80% of all NARWs have been entangled in some sort of fishing gear as shown by scars on their bodies. On average, these whales acquire a new entanglement scar about every three years.



Responders from Georgia DNR and FWC attempt to remove rope from an entangled right whale. Photo taken by FWC under NOAA permit #15488.

In February, a young (4-year-old) right whale was spotted off the Georgia coast with more than 100 yards of rope trailing from its mouth. The lead-weighted rope was tangled in the whale's baleen (the large plates that hang from the roof of the whale's mouth and allow it to filter plankton out of the water). Specially-trained teams from the Georgia Department of Natural Resources and the Florida Fish and Wildlife Conservation Commission managed to remove most of the rope, but the young whale had sustained severe injuries to its head and tail. We do not know what the long-term prognosis is for this animal.

Researchers believe that whales often become entangled in ropes that are used to attach fishing traps to each other or to buoys. As whales are feeding, they swim with their mouths open. If the whales are feeding in an area where traps are set, they can easily end up with rope in their baleen. Whales do have tongues which they could possibly use to loosen the rope from the baleen, but if the rope becomes wrapped around the whale's upper jaw (or worse, around both upper and lower jaws) the animal will need human intervention to remove it. Entanglements can prove fatal—for example if the rope interferes with the whale's ability to feed, or if injuries from the rope or attached gear are severe.

Researchers from the New England Aquarium have been looking for ways to help keep right whales from becoming entangled in fishing ropes. They have spent the past several years conducting studies to try and determine whether whales can see and avoid ropes of various colors. It appears that the right whales might be able to see and avoid ropes that are red or orange, while they do not seem to see ropes that are green or black. It is too early to know whether this research will result in recommendations or mandates for the trap fishermen in the Gulf of Maine region (one of the right whales' main feeding grounds). Past efforts to help reduce whale entanglement in trap gear included requesting that fishermen switch from floating ropes to sinking ropes. These types of gear modification are expensive for fishermen to implement, so relying on voluntary compliance with suggested changes is probably largely ineffective.

It is thought that there are only about 500 North Atlantic right whales in the population. There were ten calves documented in the 2013-14 calving season. This is below the recent average of 22 calves for a season, but is similar to the number of calves born in 2012. The whale mothers range from first-time moms to an experienced mother who has had six calves. It is possible that other calves will be spotted in the feeding areas (Gulf of Maine and Bay of Fundy) later in the year, so hopefully the total number of calves for this season will increase.

We're now on Facebook—check out facebook.com/NEFLSeaGrant and “like” it to keep informed about coastal topics in the region. Don't have a Facebook account? That's OK—you can view the page without one :)

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<http://stjohns.ifas.ufl.edu/sea/seagrant.htm>

More “Mark your calendars”

- May 6-20—Wildlife Monitoring Special Topics Course, St. Lucie County. For more information, see www.masternaturalist.org (“current course offerings”).
- May 10—Women’s fishing clinic, Fort Clinch State Park, Fernandina Beach. Pre-registration is required, but the all-day workshop is free. To pre-register, contact Rebecca Lucas at Rebecca.Lucas@myfwc.com or 850-617-9639.
- May 17—8-11 am, St. Johns Co. STEM Fair, Palencia Elementary School. Contact Brian Morgan (morganb@stjohns.k12.fl.us) for details.
- May 31—10 am to 2 pm—Flagler County Extension Spring Fling Extravaganza/Centennial celebration. Call 386-437-7464 for more information.
- June 30-July 3—Marine Science 4-H Camp (Flagler Co). Contact Martha at 386-437-7464 to see if space is available.
- July 7-10—Marine Science 4-H Camp (St. Johns Co). Contact Kellie at 904-209-0430 to see if space is available.
- July 21-25—National Marine Educators Association conference (Annapolis, MD). See www.nmea2014.com for more information.

Please check the calendar at <http://calendar.ifas.ufl.edu> for other environmental education programs around the state.

Aqua Notes is provided as one of the many services relating to educational programs offered by the University of Florida/IFAS cooperative extension service. This publication is available on the Web at <http://stjohns.ifas.ufl.edu>. The use of websites or product names in this publication is not a guarantee, warranty or endorsement of the sites/products named and does not signify that they are approved to the exclusion of others. For more information about this document, contact Maia McGuire at the Flagler County Extension Service at 386-437-7464.

The Foundation for The Gator Nation

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