

(/hboi/)

≡ MENU



## Indian River Lagoon Observations

---

**April 27, 2016: Our Tenth IRLON Site**

**M. Dennis Hanisak**  
**Research Professor & IRLO Director**  
**FAU Harbor Branch**

Today our team installed our tenth station in the Indian River Lagoon Observatory Network of Environmental Sensors (IRLON) (</hboi/irlo/irlon.php>). This one was a long-time coming, as I first wrote the proposal for this site back in 2013 to the South Florida Water Management District's St. Lucie River Issues Team. (<http://www.sfwmd.gov/portal/page/portal/xweb%20protecting%20and%20restoring/stlucie>) The Issues Team is a collaborative group of federal, state and local governments, and agricultural and environmental organizations. Its goal is to accelerate and implement "ready-to-go" projects that provide immediate results toward improving water quality and ecosystem functions in the St. Lucie Estuary and Indian River Lagoon. We hope this station, as well as our whole network, will contribute to that important goal.

The funding for this project became available in 2015. At that point, we knew where our other sites in the St. Lucie Estuary (SLE) ([/hboi/irlo/sle\\_project.php](/hboi/irlo/sle_project.php)), funded though the Florida Department of Environmental Protection, would be. And we also had a recommendation by the IRLO Science and Technology Advisory Committee (</hboi/irlo/docs/IRLO-STAC.Meeting.20140729.Summary.1.pdf>) as to where our tenth site should be: in the C-44 Canal near the locks that control freshwater discharges into the South Fork of the SLE. This would allow us to determine the short- and long-term impact on the estuary of those discharges, which vary tremendously from year to year. Today we are deploying a sophisticated instrumentation package, consisting of a Land/Ocean Biogeochemical Observatory (LOBO) unit and weather sensors, to provide real-time, high-accuracy and high-resolution water quality/weather data (for details of what we will measure, see our IRLON page) (</hboi/irlo/irlon.php>).



*Dave Bourdette, who with Jeff Smith, fabricated all of the customized parts for the installation, took the lead in the deployment of the I-beam, power supply, and weather station. (Image credit: M. Dennis Hanisak)*

Deploying our instrumentation at a site takes much preparation. Once the order goes into the vendor, we have about four months before receipt. During that time, we select the exact location of the site and working with the Coast Guard for permission to use one of their navigation markers for our instruments. For this new site, SF-2, LOBO Manager Kristen Davis, Engineer Ben Metzger, and I did that on November 21, 2015. We carefully took various measurements that Ben would use to design our installation plan, including Coast Guard approval. We thought we were all set with our first choice of site, but the Coast Guard wisely advised us that there were some challenges there, and we quickly settled on a Plan B, Marker 50, which is in sight of the lock itself.

Once the equipment is received, part of our IRLON team tests it, while others work on fabricating what is needed for its deployment. Our last test is always done in the Harbor Branch Channel, which is quite convenient. When we are totally satisfied that the instrumentation is good to go, five of us work together on the deployment, which takes several hours, including testing to make sure that the data being collected is being received by the computer server from which anyone can look at the data (to link to our data, go to <http://www.irlon.org/> (<http://www.irlon.org/>)) (<http://fau.loboviz.com/>)

Today went very smoothly! Key reasons for that: excellent planning by the whole team, and the expertise and team work today of our engineers and fabricators (Ben and Machinists Dave Bourdette and Jeff Smith) and Jon Richardson, our IRLON Technical Coordinator, responsible for all day-to-day field ops for IRLON. I was thankful to be a small part of the highly skilled team we have, and delighted that all went well!



*Ben Metzger (left) and Jon Richardson finished the deployment of the LOBO. (Image credit: M. Dennis Hanisak)*

Moving forward here are some of the questions this new site will help us address:

- How do freshwater discharges and watershed runoff impact water quality in the IRL and SLE?
  - What is the nutrient (nitrate, phosphate) load?
  - What is the impact on light attenuators (turbidity, water color, chlorophyll) on seagrass?
  - What is the relationship to algal blooms?
- How does water from these freshwater discharges interact with oceanic water flowing through the inlets?

And if you want to see what this site looks like, take a look at the great video below by another talented member of our IRL team, John Hart, shot on the maiden voyage of the MARBOT drone!



*Here's what the site now looks like! (Image credit: M. Dennis Hanisak)*

## Observations Archive

- › April 6, 2016: You can observe a lot by just watching ([/hboi/irlo/april06\\_2016.php](/hboi/irlo/april06_2016.php))
- › April 27, 2016: Our Tenth IRLON Site ([/hboi/irlo/april27\\_2016.php](/hboi/irlo/april27_2016.php))
- › May 12, 2016: Barnacle Busting ([/hboi/irlo/may12\\_2016.php](/hboi/irlo/may12_2016.php))
- › May 26, 2016: Future of Water Quality Research in Florida Workshop ([/hboi/irlo/may26\\_2016.php](/hboi/irlo/may26_2016.php))
- › June 29, 2016: St. Lucie Estuary Algal Blooms ([/hboi/irlo/june\\_29\\_2016.php](/hboi/irlo/june_29_2016.php))
- › July 08, 2016: Connecting Users to IRL Data ([/hboi/irlo/july08\\_2016.php](/hboi/irlo/july08_2016.php))
- › October 11, 2016: A Brush with Hurricane Matthew ([/hboi/irlo/oct11\\_2016.php](/hboi/irlo/oct11_2016.php))
- › January 17, 2017: Martin County Youth Leadership Environmental Day ([/hboi/irlo/jan17\\_2017.php](/hboi/irlo/jan17_2017.php))
- › March 3, 2017: St. Lucie Estuary – What A Difference A Year Makes! ([/hboi/irlo/mar03\\_2017.php](/hboi/irlo/mar03_2017.php))
- › June 12, 2017: Here Comes the Rain – 2017's First Flush ([/hboi/irlo/june12\\_2017.php](/hboi/irlo/june12_2017.php))
- › August 24, 2017: An Estuary at your Fingertips: Connecting the Community to Environmental Data ([/hboi/irlo/aug24\\_2017.php](/hboi/irlo/aug24_2017.php))



Start the discussion...

LOG IN WITH

OR SIGN UP WITH DISQUS ?

Name

Be the first to comment.

Florida Atlantic University
777 Glades Road
Boca Raton, FL 33431

"Florida Atlantic University embodies a culture of strategic and collaborative community engagement that results in mutual benefit to the institution and the diverse internal and external communities that it serves."

Campuses

- Boca Raton (/explore/boca\_raton.php)
Dania Beach (/broward/daniabeach/)
Davie (/broward/davie/)
Fort Lauderdale (/broward/fortlauderdale/)
Harbor Branch (/hboi/)
Jupiter (/jupiter/)

Quick Links

- Consumer Information (/finaid/resources/other-resources.php#consumer-info)
Contact Us (/explore/contact.php)
Emergency Information (/admin/EmergencyInformation.php)

[Employment Opportunities \(//fau.edu/jobs/\)](http://fau.edu/jobs/)

[Get Help \(//onestop.fau.edu/\)](http://onestop.fau.edu/)

[Report a Concern \(//www.fau.edu/report\)](http://www.fau.edu/report)

[Privacy Policy \(/privacypolicy.php\)](/privacypolicy.php)

[University Regulations and Policies \(/policies/policiesregulations.php\)](/policies/policiesregulations.php)

An Equal Opportunity/Equal Access Institution

© ([https://a.cms.omniupdate.com/10?skin=fau&account=fau&site=HBOI&action=de&path=/irlo/april27\\_2016.pcf](https://a.cms.omniupdate.com/10?skin=fau&account=fau&site=HBOI&action=de&path=/irlo/april27_2016.pcf)) Copyright

2019. Florida Atlantic University