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## Indian River Lagoon Observations

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**May 26, 2016: Future of Water Quality Research in Florida Workshop**

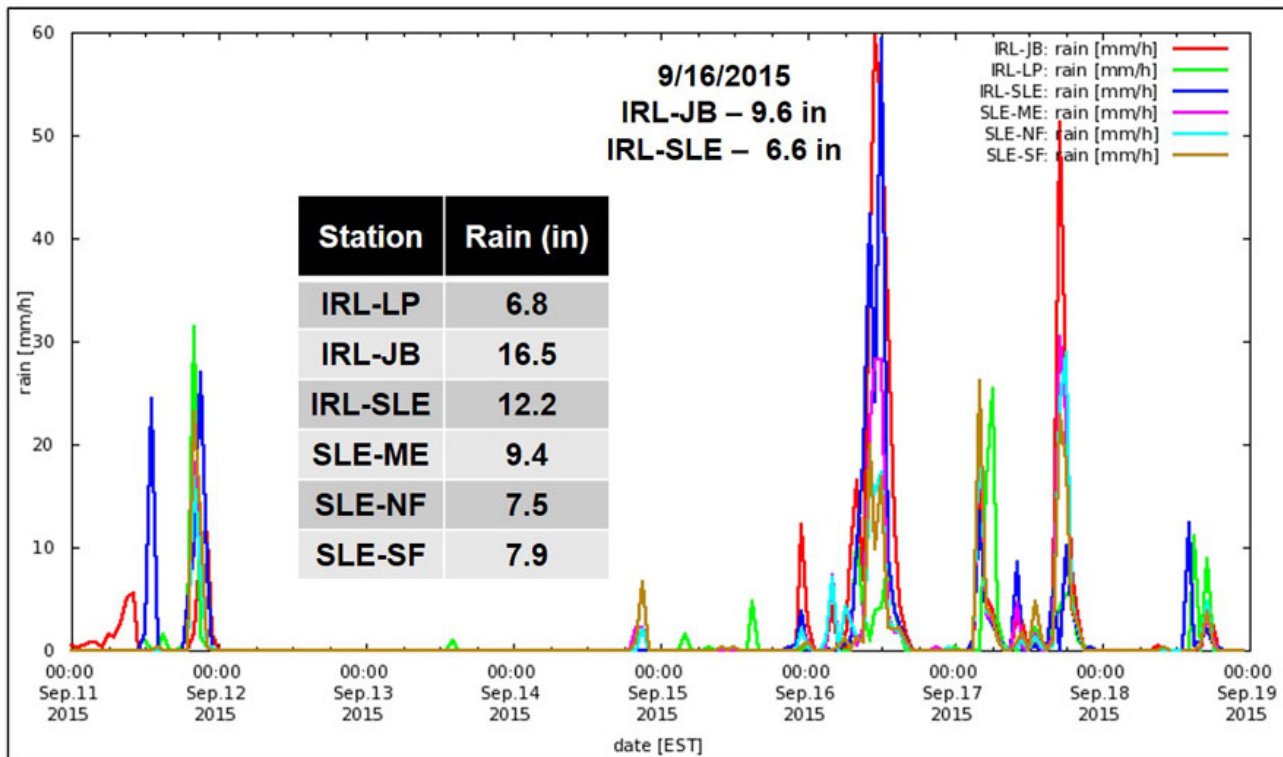
**Kristen S. Davis**  
**IRLON Manager**  
**FAU Harbor Branch**



*Presenters at the Future of Water Quality Research in Florida Workshop covered a variety of Florida's current water quality research interests. (Photo credit: Treasure Coast Research Park,*

Today I had the pleasure of presenting at the Future of Water Quality Research in Florida Workshop at Exploration Park at the Kennedy Space Center. The workshop was sponsored by Space Florida (<https://www.spaceflorida.gov/>) & Florida Research Parks Network (<http://www.floridaresearchparks.com/>) and brought together more than forty stakeholders from across Florida representing science, industry, and government. Presentations covered a wide variety of topics including onsite wastewater treatment, remote sensing capabilities for large-scale water quality observations, and technologies used in agriculture to assess water quality and conserve water.

## LOBO Weekly Rainfall (9/11-9/18/2015)

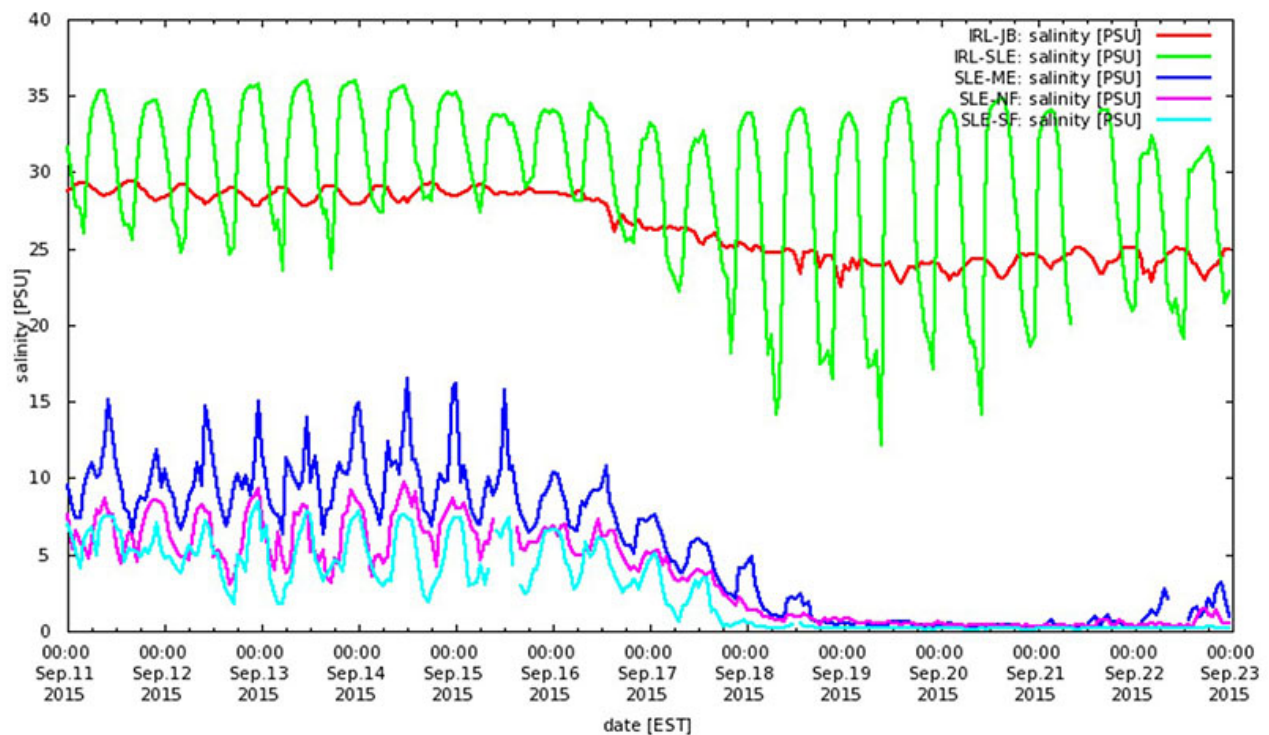
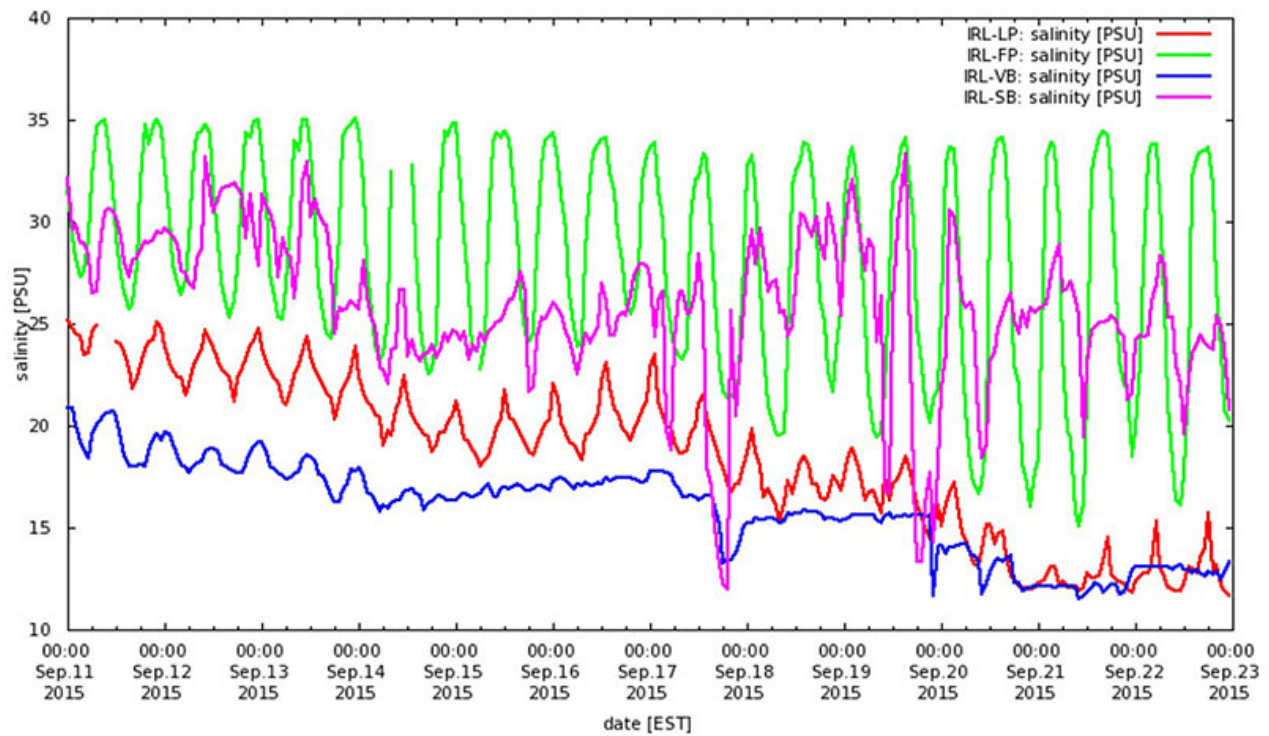


Hourly measurements of rainfall show weekly accumulations ranging from 6.8 to 16.5 inches across the network, and a maximum daily total of 9.6 inches at IRL-JB on 9/16/2015 (Screen shot of IRLON data, September 11-18, 2015, <http://fau.loboviz.com/loboviz/> (<http://fau.loboviz.com/loboviz/>)).

My presentation included an overview of IRLON and data from an unusual rain event in September 2015 caused by the remnants of Tropical Storm Grace. This was the first major rain event that occurred IRLON-wide since the installation of the sites in the St. Lucie Estuary (SLE) and provided an opportunity to capture the watershed response for both sections of the network, especially without the influences of Lake Okeechobee discharges.

The rain event caused widespread flooding throughout the Treasure Coast and IRLON sites recorded weekly rainfall totals ranging from 6.8 to 16.5 inches. On September 16, 2015 daily maximum rainfall at IRL-JB exceeded 9 inches! Watershed runoff rapidly increased beginning September 17, 2015 with inflows greater than 1,000 cubic feet per second (cfs) for the next four days. Runoff varied between the northern and southern networks with maximum daily inflows of 6420 and 9126 cfs respectively.

Salinity decreased at all nine IRLON sites and the three sites in the SLE recorded near freshwater



Hourly measurements of salinity for both northern and southern IRLON show the varied response to an unusual rain event in September 2015 (Photo credit: Kristen Davis, <http://fau.loboviz.com/loboviz/> (<http://fau.loboviz.com/loboviz/>)).

conditions during the period of maximum inflow. Similarly, phosphate increased at all nine sites with greatest increases seen at the three SLE sites. Chlorophyll response varied between the northern and southern network and despite the greater increase in phosphate concentration to the south, chlorophyll remained less than 10  $\mu\text{g/L}$ , which is historically considered the minimum bloom criterion. Chlorophyll recorded at IRL-LP, IRL-VB, and IRL-SB in the northern network was greater than 10  $\mu\text{g/L}$  for several days following maximum inflow.

For more information about the workshop and access to all of the presentations please go to <http://www.treasurecoastresearchpark.com/wq-research-workshop/> (<http://www.treasurecoastresearchpark.com/wq-research-workshop/>).

## 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))

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