

Loxahatchee River District

Water Reclamation | Environmental Education | River Restoration

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D. Albrey Arrington, Ph.D., Executive Director

MEMORANDUM

TO: Albrey Arrington, Ph.D., Executive Director

FROM: Bud Howard, Director of Information Services

DATE: September 10, 2015

SUBJECT: Monthly Governing Board Update for August 2015

WildPine Ecological Laboratory

New Laboratory Personnel



We are excited to welcome Dr. Elizabeth (Betsy) Stoner into the newly formed Senior Scientist position, which we created following the reorganization of the laboratory. Betsy will initially focus on analysis of our long-term oyster reef, seagrass, and water quality data sets, and prepare scientific reports for publication in peer-reviewed scientific journals. Betsy comes from the University of Miami, where she was a postdoctoral fellow. Betsy received her doctorate in 2014 from Florida International University in biology; her dissertation research focused on the causes and consequences of human-driven benthic jellyfish blooms on coastal marine ecosystems of The Bahamas. Betsy is a marine ecologist with a research background broadly centered on understanding how human disturbances (e.g., nutrient loading) influence coastal marine and estuarine ecosystems.

Ryan Johnson is our new intern for the winter. Ryan has a Bachelor of Science degree in Biology from Merrimack College in Massachusetts. He is eager to expand his knowledge about Florida ecosystems and the District's research and monitoring programs. Previously, Ryan has conducted research on beaver dams, sea turtles and feeding behavior of the bottlenose dolphin in Key West. We have trained Ryan to continue our weekly bacteria sampling and analyses project.



Gordon M. Boggie
Board Member

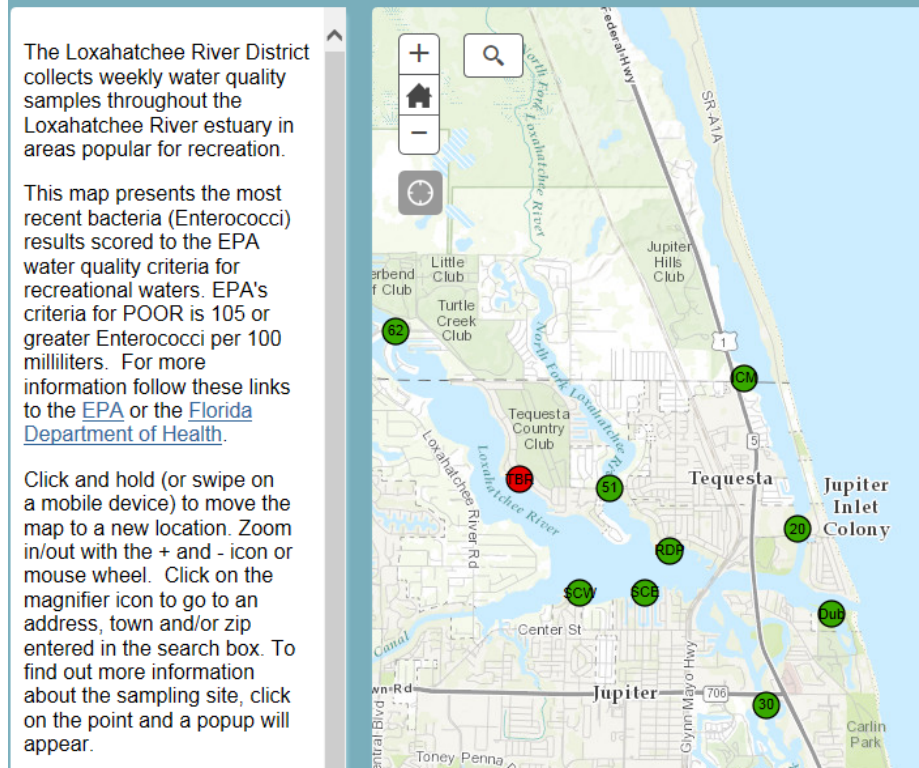
Dr. Matt H. Rostock
Board Member

Stephen B. Rockoff
Chairman

Harvey M. Silverman
Board Member

James D. Snyder
Board Member

Water Quality Results for the Loxahatchee River Bacteria Results for September 1, 2015



Weekly Bacteria Results map from the Maps & Apps section of the District's Website (www.loxahatcheeriver.org, Map & Apps on the left menu buttons, Map #3 Weekly Bacteria Results)

Project Riverkeeper

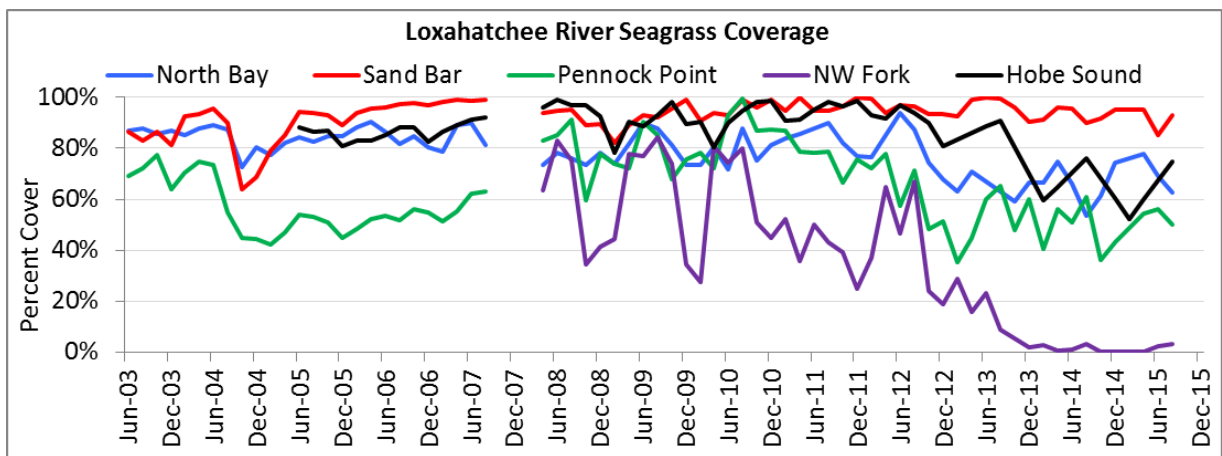
Staff sampled and performed water quality analysis for seventeen sites throughout the watershed in August. Bacteria conditions are still looking good this summer which is a stark contrast to the August 2014 maps (see www.loxahatcheeriver.org/wqresults.php). Site 107 (River's Edge) was the only Riverkeeper station that had poor bacteria levels last month, compared to 12 sites in August 2014 (50% of the samples collected in 2014 were poor. Nutrient levels were also better than typical levels for August.

Hydrologic and Datasonde Monitoring

Monthly total rainfall in August was 9.25", above the historical monthly average of 8.3". Nearly 6" of the rain occurred during the last week of the month. The marginal rainfall for June, July and most of August resulted in lower than normal river flows. Average flow at Lainhart dam was 78cfs. Peak flow at Lainhart was 214cfs on 8/31 which came at the end of a 5 day stretch of flows over 100cfs, and the period of heavy rain. Kitching Creek datasonde station experienced pronounced variation in pH which dipped down to 6.8 at the end of the month as a result of the increased river flow. The usual mean pH at this site is around 7.3. The low river flows also resulted in some highly unusual (for summertime) increases in salinity at the Kitching Creek Station with mean daily salinity at greater than 1ppt from 8/10-8/15 and from 8/24-8/26. There was no flow from S-46 flood control structure in August.

Seagrass Monitoring

August concluded our seagrass monitoring for the year since adopting the new sampling frequency which focuses on the peak growth period of seagrass species found in the estuary (April, June, and August). Johnson's seagrass experienced the expected sharp decline in percent cover at all sites we typically observe this species. We were encouraged to see sparse coverage of Johnson's seagrass at the Northwest Fork site where it disappeared for over a year. However, at 2% cover, Johnson's is far from historic means, which oscillated between 10-70% prior to Tropical Storm Isaac in August 2012. Additionally, Shoal Grass has once again been detected at the Northwest Fork site following a brief disappearance. This species was also impacted by the storm of 2012 and has yet to show signs of recovery (see figure below). In August, we also monitored the Hobe Sound reference site, which has been experiencing a decline in seagrass cover over the past two years. Fortunately, the August sampling showed an increase in coverage of for all three species commonly encountered here (Turtle, Shoal and Manatee grass).



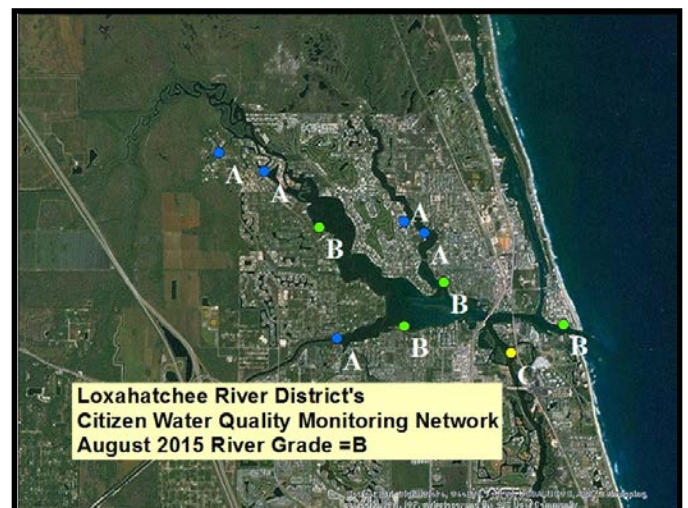
Total seagrass cover for each monitoring site.

Oyster Recruitment Monitoring

In anticipation of the late summer/fall oyster spawning, staff resumed oyster recruitment monitoring. For the 28d period that concluded August 21, we found higher than usual oyster settlement at all monitoring sites except for the downstream site in the SW Fork where, unfortunately, it appears the monitoring device was tampered with and not included in the dataset. The mean settlement in the NW Fork was 4.7 spat/shell and in the SW Fork the mean was 2.6 spat/shell. The historic norm for these two sites was 1.2 spat/shell and 1.0 spat/shell respectively.

Volunteer Water Quality Monitoring

In August the volunteer water quality grade scored a high "B". There was a slight degradation in the dissolved oxygen and color as a result of the warmer water temperatures and pulse increases in freshwater flow.



Information Technology

New Server Setup & Configuration

Work continues on the configuration and migration of systems and data to the new server.

Computerized Maintenance & Management System (CMMS)

In August we ended our relationship with the software provider we were working with on a new CMMS because of egregious delays and configuration issues. After careful consideration and research, we believe our best strategy is to upgrade our legacy CMMS to the new version, rather than switch software companies. Once we activate the new version of the software, we will gradually and incrementally configure and migrate our data into the new software over the next year, then implement additional enhancements over the next several years.

Storm Preparation

Tropical Storm Erika provided a great test of our IT-related hurricane preparations. It was encouraging that our plans proved to be very functional for system backup and recovery, and we feel very prepared for the next storm, whenever it may come.

Customer Service

Payment Processing

With our July bills due on August 14, staff processed more than 15,500 payments totaling nearly \$2.1M for the month of August. Our new digital payments tool facilitated the very efficient processing of over 2,500 of those payments that our customers made using their bank's online bill pay service, or through our website. This month we will go live with two additional online bill pay processors, which will allow us to capture all online bill payments digitally, rather than receiving paper checks from the various banks.

Bill Format Changes

Our October billing will feature a new layout for our email bills, and very likely our print bills. The new email bills feature a clean, informative layout that is easy to view on any type of device. Our new print bills also feature a new clean layout and will provide much greater flexibility for communicating messages to our customers.