

Loxahatchee River District

Water Reclamation | Environmental Education | River Restoration

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

MEMORANDUM

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

FROM: Bud Howard, Director of Water Resources

DATE: March 12, 2015

SUBJECT: Monthly Governing Board Update for February 2015

WildPine Ecological Laboratory

Project RiverKeeper

In February, the Laboratory staff collected and analyzed water quality samples from 18 sites; including the 10 monthly sites, the Jupiter Country Club outfalls into the C-18, and the Jupiter Farms water control structures (WCS #2 pictured). All sites showed low nutrient and bacteria levels except for Site #107 (River's Edge) which scored "poor" for enterococcus bacteria according to DEP/EPA water quality standards. Chlorophyll levels were elevated in the southwest fork. There was little rain the week preceding sample collection and the S-46 flood control structure was closed.



JERFSA Environmental Service



On February 12th laboratory staff members worked with the students from the Jupiter High School Environmental Research and Field Studies Academy to train students in juvenile fish collection and water quality sampling using the laboratory's state of the art field equipment. On the 25th, Keith and Mike lead two groups of students for make-up events covering water sampling that were cancelled earlier in the year. These programs give students a variety of hands-on monitoring experience including, water sampling, fish collection and identification, and measuring and mapping the depth of the organic sediments (muck) at various locations in the river. Pictured, students use equipment called a "sludge judge" to measure the depth/thickness of the organic sediments.

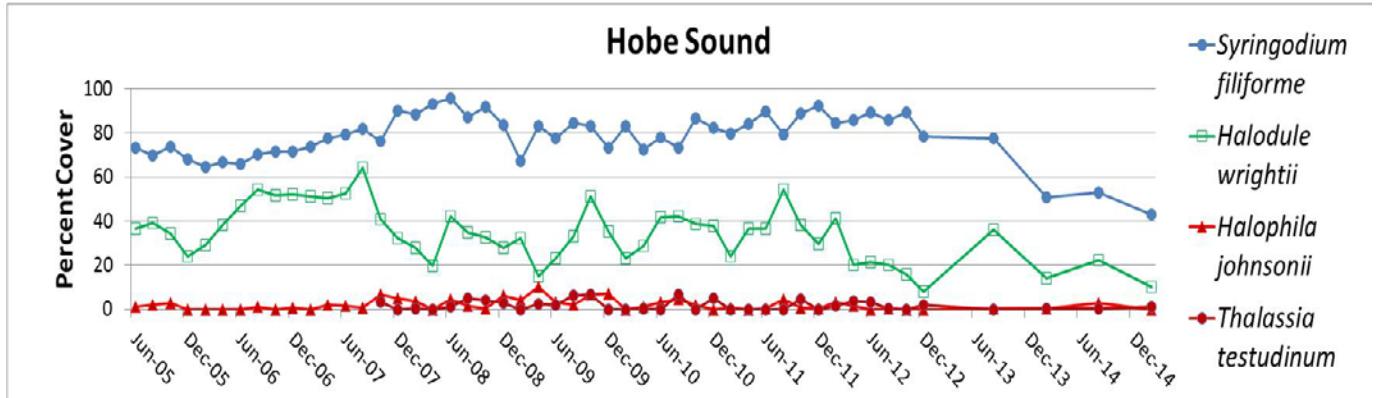
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Board Member

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Board Member



Seagrass Monitoring

The lab staff completed the bi-annual monitoring of the seagrass reference site in Hobe Sound. Results continue to show a trend of decreasing coverage and density manatee grass (*Syringodium*) that has now dropped to a new low since monitoring began in 2005. Johnson’s seagrass also appears to be trending lower relative to historical values, though the coverage of this grass is often highly variable throughout the year. The Hobe Sound site is one of the six locations monitored in February for the St. Johns River Water Management District’s Indian River Lagoon seagrass monitoring project.

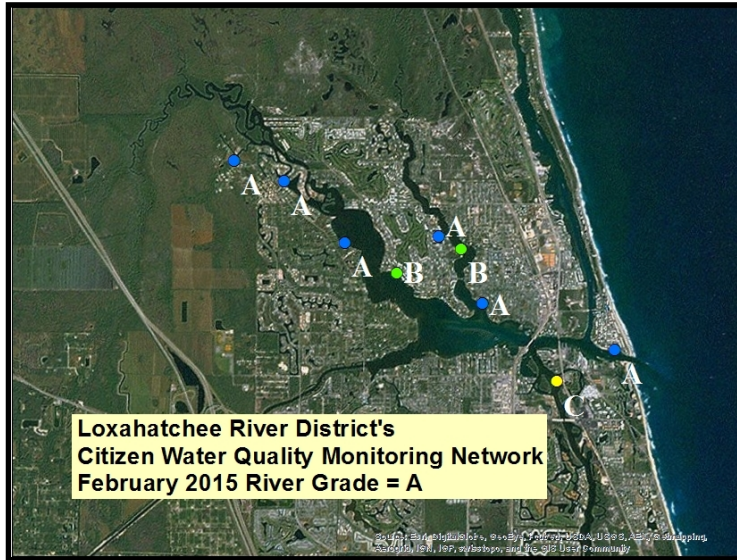
Hydrologic/Datasonde Monitoring

The rain gauge at LRD recorded 6.5 inches in February with 4.5 inches occurring on the 27th & 28th. Just west of us, the Jupiter Farms rain gauge maintained by South Indian River Water Control District (SIRWCD) recorded a total of 11 inches for the month. River flows were low, but above the minimum flow target of 35 cfs, for most of the month. Measureable flows at G-160 and 161 indicate the SFWMD is delivering supplemental flows to the river. Following the heavy rains on the 27th & 28th flows at Lainhart Dam climbed to 332 cfs. The SFWMD opened the S-46 flood control structure on the 28th, where S-46 flows peaked at 611 cfs on March 1, but then quickly diminished to 206 cfs on March 2nd. Our datasonde instruments recorded the pronounced shifts in salinity throughout the estuary through the storm event. Helen Johnson (pictured) swaps the datasonde instruments every 2 weeks for cleaning and calibration in the laboratory to ensure high quality data.



Conferences and Training

In February, Harbor Branch Oceanographic Institute sponsored the Indian River Lagoon Symposium. Lorene Bachman attended the research presentations, and David Porter attended the volunteer/community involvement segment. On February 16th, Sue Noel attended the DEP workshop on Quality Control and on the 17th Mike Smeltzer attended the DEP workshop on field sampling.



Volunteer Water Quality Monitoring

The low rainfall through most of the month and modest river flows helped to produce an “A” grade for February. This score is typical of dry season conditions with clear water, and acceptable salinity and dissolved oxygen levels. Aside from some rough ocean conditions contributing to “fair” visibilities at some sites, and some higher than optimal salinities, the state of the river overall was very good. Volunteers collected samples prior to the heavy rains on the 27th and 28th.

Information Technology

Fleet Tracking

Hardware installation is complete and we will feature a demonstration of the District’s Fleet Tracking system as part of this month’s watershed status report.

Computerized Maintenance Management System (CMMS)

The IT Team continues to work with our consultant and staff on system testing, configuration, and issue tracking and resolution for our new maintenance management system. February was a good month where we closed more issues than we added. The IT Staff completed training on the reporting system software so that we can build custom reports.

Data Management & Reporting Systems

Staff implemented a new digital worksheet for the laboratory’s Total Suspended Solids analysis that streamlines bench computations and data management, and fully integrates with our permit reporting system.

Network Security Appliance and Wi-Fi Access Point Hardware Replacement

Staff completed the research, selection and purchase of network security and Wi-Fi hardware to replace equipment that is at the end of its life cycle. Our team of consultants made excellent suggestions of products that will provide a *significant* improvement to our network security and wireless access through next-generation systems. Staff is in the process of planning and coordinating the implementation scheduled to begin later this month.