

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: February 12, 2015

SUBJECT: Monthly Governing Board Update for January 2015

WildPine Ecological Laboratory



Intern Keith Dawson monitors light attenuation in the estuary.

Project RiverKeeper

In January, the Laboratory staff collected and analyzed water quality samples at 41 monitoring sites. There was no flow to sample at site #88, the discharge at the future Lakewood development with historically very high phosphorus levels. Several stations, including Sims and Kitching Creeks, and Papaya Village, north of J.D. Park, showed elevated chlorophyll readings. The concern of high chlorophyll is the reduction in light penetration through the water to the submerged aquatic vegetation. The majority of the sites had low bacteria levels. The exceptions were two sites near the Rivers Edge slough (site 107), and Jones and Sims

creeks that were at the “poor” condition for fecal coliform and/or enterococcus bacteria. The Total Nitrogen values at four sites north of Johnathan Dickinson State Park were over the 1.54 limit for freshwaters. The highest Total Nitrogen value of 3.1 mg/L measured at station #104, a tributary to the Northwest Fork through Hobe Grove canal. Total phosphorus was also high at the Papaya Village site. There was little rain in the week preceding the sample collection events.

Hydrologic/Datasonde Monitoring

With only 1.24 inches of rain recorded at the District in January, water levels are dropping and there was less freshwater entering the river. River flows measured at Lainhart Dam have declined to an average of 44 cfs for the month, and dipped below the minimum flow target of 35 cfs for three days. Measurable flows at G-160 and G-161 indicate that the SFWMD continues to route supplemental water flows to the

Gordon M. Boggie
Board Member

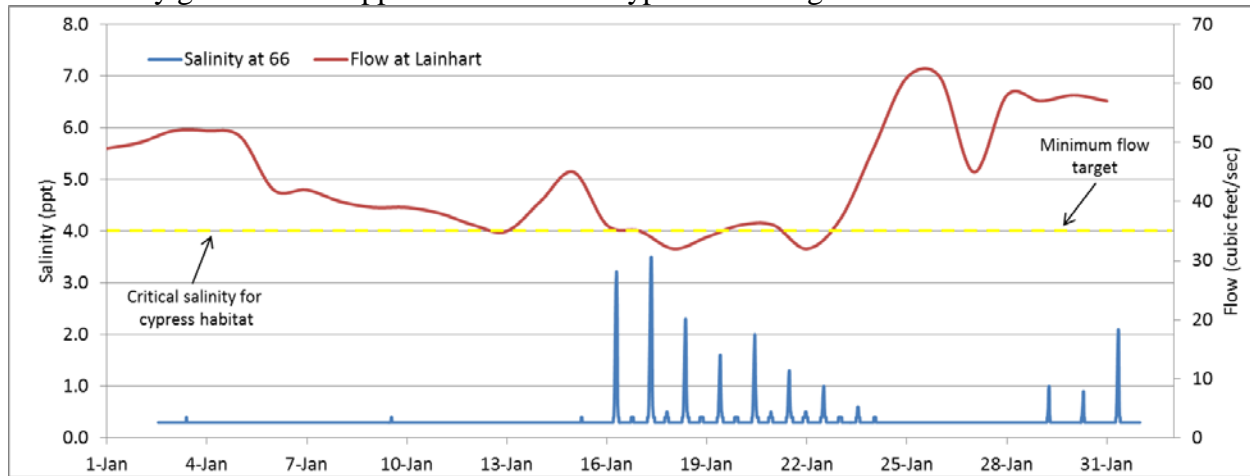
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Board Member

James D. Snyder
Board Member

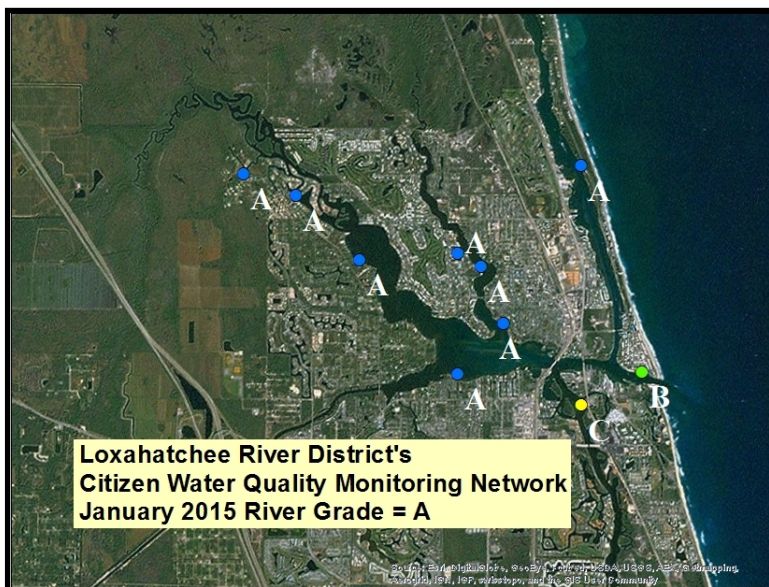
river. The lower river flow was evident in the salinity data from our datasonde instruments as the estuary and tributaries are showing higher salinities. The Kitching Creek site in the Northwest Fork had a salinity maximum of 14.2 ppt recorded at high tide. The instrument deployed at the upstream site #66 to monitor saltwater intrusion into the cypress swamp recorded a maximum salinity for the month of 3.5 ppt, though daily average salinities remained well below the 4 ppt critical threshold for the cypress habitat. Salinity greater than 2 ppt can be lethal to cypress seedlings.



Salinity at datasonde station 66 and river flows measured at Lainhart Dam illustrating the presence of saline waters at high tide as river flows diminish mid-month.

RECOVER Science Meeting

The laboratory staff attended the Restoration Coordination and Verification (RECOVER) science meeting at the South Florida Water Management District. The purpose of the meeting was to foster information exchange, collaboration, evaluation and innovation among scientists involved in the Comprehensive Everglades Restoration Plan (CERP) process, and featured some excellent presentations. The District’s monitoring data is a valuable resource to the RECOVER process.



Volunteer Water Quality Monitoring

The January water quality mirrored the December conditions, which again produced an “A” river grade. Aside from some rough ocean conditions contributing to “fair” visibilities, and some higher than historical salinities, the water quality was very good. This month, we released the first issue of our new, quarterly, water quality volunteer newsletter, *Ebb and Flow*. The newsletter features water quality results and other news relating to the restoration and environmental monitoring of the Loxahatchee. The newsletter is available at:

http://www.loxahatcheeriver.org/volunteer_program.php