

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: June 9, 2016
SUBJECT: Monthly Governing Board Update for May 2016

WildPine Ecological Laboratory

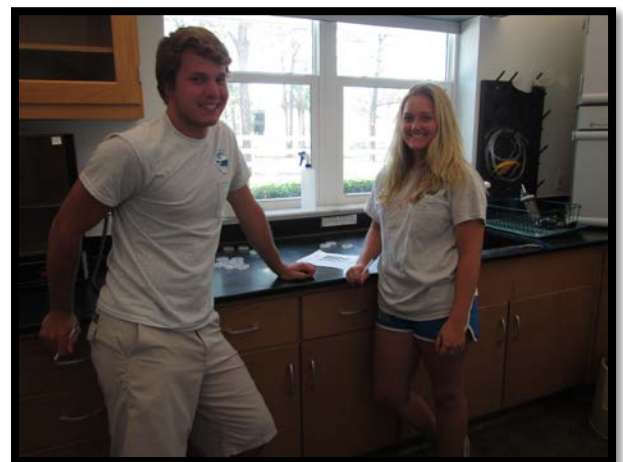
Riverkeeper Project

In May, LRD and Town of Jupiter staff did a huge sampling run of 63 water quality monitoring sites. Eighty percent of the stations showed safe levels of microorganisms, with elevated bacteria at site 107 (River's Edge) and the lower NW Fork. Several sites had elevated chlorophyll *a* concentrations, including the area north of JD State Park on Bridge Road (195 ug/L), a tributary into Jones Creek (168 ug/L), and PB Country Estates (109 ug/L), all well above the State Water Quality standard of 20 ug/L. Similarly, there were also a few high levels of Total Nitrogen and Phosphorus north of JD Park and in Jones Creek.

Our Weekly Bacteria Program continues to attract attention, including Palm Beach County Parks and Recreation and the Department of Health. We are now working with them to better understand the source of bacteria and working to create a predictive model in the Dubois Park watershed, which we will feature for this month's Watershed Status Report.

New Interns

This summer we are excited to work with two new interns - Kyle Vincent (left) and Sam Iliff (right). Sam is a sophomore at the FAU Honors College in Jupiter and pursuing a double major in Marine Biology and Mathematics with a concentration in Statistics. Before coming to the District, she was an intern at the Smithsonian Marine Station in Fort Pierce. Sam is a certified AAUS Scientific Diver through FAU and enjoys diving, kayaking and playing volleyball in her free time. Kyle is a sophomore at Eckerd College in St. Petersburg, Florida pursuing a degree in marine science with a focus in biology and chemistry. Kyle's passion is fishing and holds 10 IGFA World Records. Sam and Kyle are highly motivated and have taken the initiative to do intensive monitoring for the Dubois bacteria project.



Stephen B. Rockoff
Board Member

Dr. Matt H. Rostock
Board Member

Gordon M. Boggie
Chairman

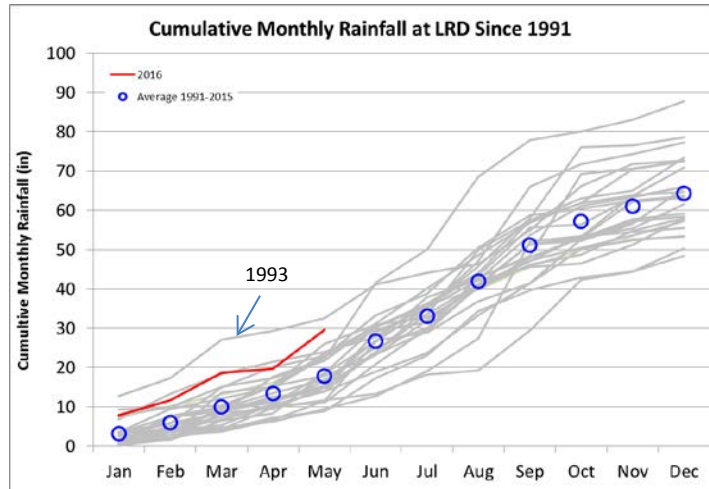
Harvey M. Silverman
Board Member

James D. Snyder
Board Member

Hydrologic and Datasonde Monitoring

May 2016 was a very wet month with 10.0” of rainfall measured at the LRD - more than twice the 4.1” of rainfall total typically observed during May. This makes May 2016 one of the wettest years since 1991, with 1993 having only slightly higher cumulative rainfall year to date. May was punctuated with a major four day rainfall event from 17th - 20th that produced 8.5” of rain, accounting for 84% of the monthly total, with the largest daily total of 3.84” on May 18.

Higher than normal rainfall in May resulted in brief periods of increased river flow. Flow over Lainhart Dam throughout the beginning of the month was less than 35 cfs for 3 days, with SFWMD providing the first supplemental flows this year through G-161 from Grassy Waters Preserve. Lainhart flows sharply increased to a max flow of 183 cfs on May 20. Flow and was elevated throughout the remainder of the month, before ending with mean daily flow of ~160 cfs. The S-46 flood control structure had some variable flows peaking at 140 cfs on the 21st, but with the major construction project of the tailwater weir operation schedules may be unusual.



May had generally lower than average salinities throughout the river, but no noteworthy differences from the period of record (POR). Most monitored sites in the river were 1-2ppt below the POR monthly average. Jones Creek stands out with 18.4ppt salinity this month, compared to 22.4ppt from the POR. The river is warming at the usual pace with an average monthly temperature of 27.2°C (81.0 °F), which is an increase of 2.2°C from April.

Oyster Recruitment Monitoring

Oyster recruitment monitoring in May suggests that the spring spawning appears to be waning as the spat density is down considerably from April, though settlement was still observed at all four sites. Mean oyster settlement density in the Southwest Fork was 206 spat m⁻² compared to 1,215 spat m⁻² counted last month. The downstream site there had a mean density of 368 oysters spat m⁻² while density at the upstream site was substantially less at only 43 m⁻². This compares to last month's figures of 1,520 spat m⁻² and 910 spat m⁻² respectively. Settlement evaluation of the Northwest Fork upstream site was 292 spat m⁻² compared to last month's mean of 2,632 spat m⁻². The downstream sample evaluation is ongoing, but initial observations suggest that recruitment is as active as the other sites.

These oyster settlement observations are a bit unusual based on historical water temperatures. The scientific literature indicates temperature is a primary factor in triggering oyster reproduction. Our daily average water temperatures in May were modestly warmer than April with a mean range of 27.7°C (81.9°F) - 27.9°C (82.2°F), and peak temperature ranges between 31.4°C (88.5°F) - 31.6°C (88.9°F), which historically corresponds with high settlement activity. Generally, oyster settlement is observed when the average water temperature reaches ~28.0°C (82.4°F) and decreases as max temperatures near 31°C (88°F) or higher.

Information Technology

Computerized Maintenance Management System – Computerized Maintenance Management System (CMMS)

Alan and Dave continue to work on extensive data re-coding, re-formatting and organization as part of our conversion for our CMMS upgrade. The extensive number of assets we track, and our creative use of the predecessor software, is presenting numerous challenges for the software consultant's highly capable technical team but they continue to make good progress.

Website Update

Last month we kicked off our project to update the District's public website. The new site will be built on a software platform that facilitates viewing on a variety of devices (mobile, tablet and desktops) and provides a fresh organization to the information we provide. We anticipate going live with the first phase of the website sometime in August.

Uninterruptable Power Supply (UPS) for Administration

Staff completed the installation of the whole-office UPS for the Administration office. This new system provides consistent clean power to all computer systems in the office regardless of power sources (FPL or generator), and eliminates the continuous reliability issues and frequent replacements of the desktop UPS systems we used previously.



Customer Service

Payment Processing

The 2nd Quarter Bills were due on May 19 and our staff processed nearly 17,000 payments totaling over \$2.3M for the month. More and more customers are utilizing their online bill pay that we can now process very efficiently. In the four days prior to the due date we received nearly 2,800 digital payments, with a single day peak of 834 payments received and processed. With excellent teamwork and efficiencies we reached a new milestone this quarter with *no backlog* in payment processing – a huge accomplishment considering the volume of work handled by only four customer service staff, with occasional help from two other staff when available.

Delinquent Account Processing Migration

In addition to processing numerous payments, the customer service team continues to make preparations for managing delinquent account data in our data management system, rather than by the Attorney's office. This work includes merging account information in our database, configuring and testing data systems to apply fees, charges and interest, and the Attorney's processing a backlog of liens.