

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 Information Services

DATE: June 11, 2015

SUBJECT: Monthly Governing Board Update for May 2015

WildPine Ecological Laboratory

New Golf Course Monitor Wells

As part of our new reuse permit, DEP reduced our monitoring requirements at the golf courses we serve because of our extensive historical record of data. We are now required to only monitor one well per golf course, plus a community monitoring well, for a total of 11 sites (from 33). New wells were established for this monitoring that are shallower so we can better evaluate the flow of any nutrients in the groundwater. Sampling began in May and our contract laboratory tests them quarterly.



Pace Labs sampling at Daily Park which is the midpoint our Reuse System

Project RiverKeeper

In May, staff sampled and analyzed water samples from 41 sites throughout the watershed. Jones & Sims Creeks and Site 107 at River's Edge slough continued their pattern of high bacteria counts. There were also high counts in the JD Park area at Site 111 which drains into Kitching Creek, and Site 55 at County Line Road which drains out of JD Park. Only 2 stations had Total Nitrogen readings above the EPA/FDEP Numeric Nutrient Criteria (NNC) and they drain into JD Park (Sites 56 at Papaya Village & 111). Phosphorus levels were generally good with exception of high readings at Site 111, Kitching Creek, Jones Creek, and site 56. The most interesting story was at Site 88 adjacent to the proposed Lakewood Project which flows into the Wild & Scenic portion of the river north of Indiantown Road Bridge. Historically, when there has been sufficient flow to sample, phosphorus levels at this site have been dreadful - likely a result the former agriculture use of the site. But good news - this month marks the first time phosphorus levels were below the NNC! This is an encouraging result and we will continue to monitor the site whenever there is flow. We had some high chlorophyll results at several

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sites including sites 56 (Papaya Village), 111 (upstream of Kitching Creek), 75 Jones Creek, and 107L at Rivers Edge. The warm temperatures, nutrients, and low flows all fuel this algae growth.

Sucralose Research Project



Laboratory staff collecting a sample from canal for sucralose project.

Staff collected samples from an additional set of 18 sites as part of the microbial source/Sucralose Project. This project is helping to further our understanding of bacteria results as it relates to human derived pollution. While the peak of the dry season is typically late April or early May, we had some unusual rain events this winter that resulted in water levels higher than normal. With our study design calling for sampling at the lowest water conditions we were keeping a careful eye on weather conditions. Lab staff made an excellent judgment call and rallied to collect these samples on April 6, just prior heavy rain event and the apparent early start to the wet season. Our preliminary sucralose results from the April sampling showed sucralose concentrations higher than the previous, wet-season sampling in October. More of the sites showed detectable levels of sucralose with

14 of 18 sites, compared to 10 of 18 sites in October. The highest sucralose levels were along Sims Creek and in the Whispering Trails neighborhood. We have collected additional samples and will present a summary of our findings in a future watershed status report.

Hydrologic/Datasonde Monitoring

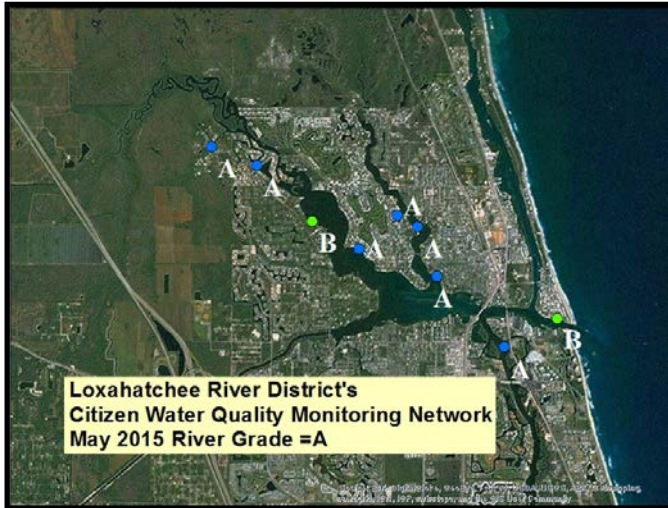
We measured 2.7” of rain in May, well below the historical monthly average of 4.6” (since 1991). Average river flows measured at Lainhart Dam were a modest 47 cfs compared to the historical average of 52 (since 2001). Daily mean flow at Lainhart dipped below 35cfs on 3 days with the lowest flow on the 29th at 9.0 cfs, which might be a measurement error. Despite this low flow, salinity at site 66 (~RM 9.5) never exceeded 0.5 ppt and slightly downstream at the river mile 9.1 USGS monitoring site the highest reading was 0.7 ppt.

Oyster Recruitment Monitoring

Oyster recruitment this spring was brief but intense. From April 2nd to 30th we recorded the most robust recruitment in the project’s 8-year history with Northwest Fork with new oyster counts of 537 spat/10 shells and Southwest Fork at 330 spat/10 shells. Recruitment during the following month (April 30 – May 29) declined substantially to 61 spat/10 shells and 4 spat/10 shells, respectively. The largest spat were found in the Southwest Fork with spat measuring 22 and 27mm at the upstream and downstream stations. In the Northwest Fork the largest spat were 13 and 17 mm at the upstream and downstream stations.



Oyster recruitment monitoring shell from the Southwest Fork showing numerous new oysters after only 28 days in the field.



Volunteer Water Quality Monitoring

Volunteer water quality monitoring scored an “A” for the month of May. The water clarity was marginal near the Inlet during a period of rough seas, but very good throughout the rest of the system. With the lower river flows, salinities were elevated throughout the sampled areas.

Information Technology

Office 365 Conversion

The IT Team has been researching and coordinating our planned upgrade to Microsoft Office 365 for Government, Microsoft’s Cloud-based email solution. Office 365 also includes perpetual upgrades, and web versions, of the Microsoft Office Software Suite. Once implemented, this solution will simplify our email/server maintenance and administration presently through Microsoft Exchange on site.

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. During May our contractor resolved 32 issues but we added 27, so we still stand at roughly 60 high priority issues remaining.

EPA Cyber Security Conference

Alan, Joe, and Jason attended a one day conference organized by the EPA on the cyber security of SCADA/Industrial Control Systems. The conference emphasized employee training, best practices and planning for remediation.

Customer Service

New Staff – In May we welcomed two excellent staff members to the Customer Service Department. Cindy Denton comes to us with great experience in banking and will primarily work at the front desk. Sue Tapia also brings a strong background in banking and property management. Welcome Cindy and Sue!

Payment Processing – Staff processed over \$2.3M in payments during the month of May. Into the future we will track the numbers of each type of payment as part of efficiency improvements.