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: November 12, 2015

SUBJECT: Monthly Governing Board Update for October 2015

WildPine Ecological Laboratory

Annual Sampling Events Completed for WWTP Permit

The lab coordinated the annual permit required sampling of our Influent, Effluent, Nano Concentrate and Nano Blend for comprehensive analysis by our lab contractor. Staff set up 24-hour auto-samplers at each site and communicated our plan with the Town of Jupiter to make sure they were able provide uninterrupted nano water to us during the sampling. Our permit requires us to monitor each site for 125 parameters that comprise the EPA's primary and secondary drinking water standards, as well as 82 other pollutants. At right, staff from Pace Labs fills sample bottles for some of the many analyses.

Riverkeeper Project

In October, staff collected water samples from 18 sites, including the South Indian River Water Control District (SIRWCD) control structures in Jupiter Farms. Total Nitrogen and Fecal Coliform/Enterococcus bacteria results were excellent - well below the EPA/DEP water quality standards. Chlorophyll concentrations were generally good for this time of year in the estuary, with an overall 43% reduction in chlorophyll concentrations from October 2014 to October 2015. A few freshwater canal sites and the Southwest Fork had elevated chlorophyll concentrations which are likely a related to the warm water temperatures that encourage algal growth. This year, the highest chlorophyll concentrations came from the SIRWCD control structure #3 at 17.7 µg/L compared to 37.3 µg/L in October 2014 (well-above the EPA/DEP criteria of 20 µg/L for freshwaters). Total phosphorus also showed improvement from this time last year, in which mean total phosphorus concentrations were 33% lower. Station 60, which is in the central embayment of the river, and SIRWCD water control structure #3 were both just over the EPA/DEP water quality criteria.

Hydrologic and Datasonde Monitoring

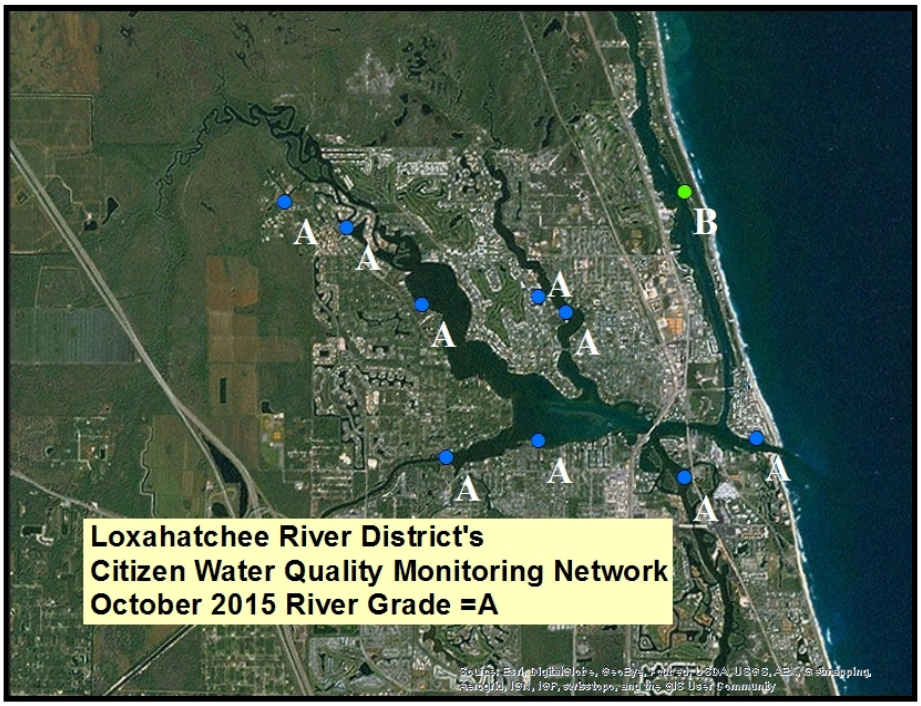
Total rainfall in October was only 1", *far* below the historical monthly average of 6.2". S-46 was essentially closed for the month with some negligible flow likely related to structure maintenance during the early October. At Lainhart Dam the monthly average was 83 cfs, with a maximum flow of 205 cfs on October 1 followed by a steadily decreasing flow reaching a minimum flow of 38 cfs on October 31 – unusually low for October. Low river flow and rainfall led to higher than average October salinities throughout most of the estuary. For example, the Oyster site in the NW fork had a monthly average salinity of 22.8 ppt compared to the historical average of 15.0 ppt, and the Kitching Creek surface site showed an average salinity above 1ppt for 8 days during the second half of the month.

Oyster Recruitment Monitoring

Our oyster monitoring for September 11 through October 10 showed continued Fall spawning. The SW Fork had the highest rate of settlement, especially near the downstream site with a density of 7.9 spat/shell compared to 2.8 spat/shell near the upstream site. Settlement activity was lower in the both sites in the NW Fork with the downstream site having a density of 1.5 spat/shell, while the upstream site had only 0.6 spat/shell.

Volunteer Water Quality Monitoring

There was a marked improvement in the volunteer water quality grade from September's "C" to this month's "A" grade. Both the low rainfall and decreasing freshwater flows helped improve water quality. The salinity, pH, and clarity at most of the sites have returned to their optimal ranges, with few exceptions.



Information Technology

New Server Configuration & Migration
With the new server configuration and settings review by our IT consultant now complete, the IT Staff began the migration of our database systems and files to the new server. Careful planning and coordination resulted in the smooth transition of all critical data management systems. The final task is to migrate the user data files for each department, while facilitating file re-organization and cleanup.

Customer Service

New Print and Email Bills
Our newly formatted sewer service bills went out on October 7 to over 27,000 print and nearly 5,000 email customers. The new, clearer format was well received and has significantly reduced the numbers of phone calls from confused customers.

Payment Processing
With the 4th Quarter bills sent, staff were busy processing over 12,800 payments totaling more than $1.7M from our 'quick paying' customers. Nearly 4,800 (~38%) of those payments were processed with our digital payments tool where customers paid through their bank's online bill pay service or through our website. The tool provides us the ability to very efficiently review these payments against key customer account information and identify issues. This new approach provides both a big time savings, but also helps us quickly catch and resolve issues for our customers. With the extra time savings we are no longer experiencing the backlog of payments to process, and gives our staff the necessary time to focus on important customer account research and management.