

Martin County Projects Update



Rivers Coalition Meeting May 29, 2014 at 11 a.m., City of Stuart Commission Chambers

(Update provided by Dianne Hughes, Ecosystem Restoration & Management Division)

- We completed collection and analysis of the first dry season sample of the bacterial DNA analysis. The samples were collected on March 31, 2014. The Florida Department of Health posted an elevated enteric bacteria level warning for the river water at Leighton Park on March 27, 2014. Unfortunately, the results we received were inconclusive, and did not result in identifying specific sources of the *enterococci*. The DNA analytical results indicate all bacterial species at all sampling locations were absent, resulting in “negative” results. It is important to note that a negative result does not mean that the sample does not definitely have the fecal contamination tested for.

There were six locations sampled:

- **C-23 Canal** on the upstream side of the flow control structure;
- **Leighton Park** (corresponds with the current MC DOH *enterococci* sampling, and samples were collected alongside the DOH field personnel to ensure the same water was being collected for analysis); *enterococci* levels were 180 cfu/100 ml on the day of sampling;
- **Bessey Creek East** (east of where Bessey Creek feeds into the C-23 canal / St. Lucie River)
- **Sandsprit Park** (in Manatee Pocket, and samples were collected alongside the DOH field personnel to ensure the same water was being collected for analysis) *enterococci* levels were 17 cfu/100 ml on the day of sampling;
- **Rio Park** (downstream of a large water reuse area in Jensen Beach, next to marina);
- **Britt Creek** (downstream of an area of high septic use in Jensen Beach).

There were 2 human biomarkers tested, as well as biomarkers for cow, horse, dog, and bird.

We are obviously frustrated that this effort did not produce the information results that we had hoped. Only repeated sampling (both during wet and dry sampling events) will enable us to draw more definitive conclusions as to the contributor(s) of fecal pollution. Our path forward is to continue to work closely with the Florida Department of Environmental Protection (FDEP), St. Lucie County Health Department, St. Lucie County, City of Port St. Lucie, City of Stuart and the Martin County Health Department (MCHD) to develop a plan for determining bacterial pollution sources within the system. Based on conversations with Dr. Troy Scott we have decided to increase the number of sites to 14 and focus on the indicators (fecal coliform, E. Coli and Enterococcus). It has been recommended by FDEP that we sample at these sites at least on 3 separate occasions. By doing so, we hope to locate hot spot areas within the watershed. Once we locate the hot spots we will then again do another round of bacterial DNA analyses to determine the source(s). The projected timetable to complete this round of sampling is before the end of August.

Note: MCHD and FDEP have been co-sampling weekly at Leighton Park and Roosevelt Bridge since May 12, 2014. FDEP is assisting in the characterization of these sites by taking depth stratified samples for enterococci, fecal coliform and taking samples for acetaminophen, sucralose, and qPCR human biomarker at the surface depth.