LCD Holds Officer Elections at Holy City Brewery

On February 18th, the Low Country District of the Water Environment Association held officer elections at Holy City brewery, in conjunction with a behind the scenes tour of the Brewery. Eighteen members attended the event, sampling a variety of craft beers, while learning about the different brewing processes, and the key role water plays in the brewing process.

The Holy City Brewery brew master discussed the history of their brewery, and explained how the brewery achieves the wide variety of beers, from the type of yeast used (ale yeast vs. lager yeast), to the hops preparation, down to the carbonation level. The Brewery’s selection is vast, and all in attendance decided that future meetings are definitely required!

In officer elections, Phillip Sexton, of North Charleston Sewer District, was elected second vice chair. The membership also awarded Olivia Flynn a water drop award for her leadership over the past year. We are off to a great start in the new year so look for a very active, fun and educational program.

New Sponsors!!

LCD of WEA has implemented a sponsorship program to assist us in our planning and funding of events. Sponsorship levels are tiered, with various perks for the different levels. This program will allow us to more effectively manage programming, without having to fund raise for each event.

LCD WEA again thanks ALL our sponsors over the years for your support, without whom our programming and events would not be possible.

Please thank our sponsors for 2016, highlighted on the back page!

Coming Events

LCD is planning a number of great events:

- Tour of Center Street WWTP Upgrades, Mt. Pleasant: September 15, 2016, with social to follow at Red’s Ice House
- CIPP Demonstration: Late October, date TBD, social to follow
- Oyster Roast and Awards at Weston & Sampson: December 1, 2016
- Officer Elections at Holy City Brewery: February 2, 2017

Please be sure we have your current email address so you can receive the e-vite.
Hanahan Water Treatment Filter Rehabilitation

On May 19th, twenty-seven LCD members attended an educational event at Charleston Public Works (CPW) Hanahan Water Treatment Plant. The event highlighted the upgrade of the sand filtration system, in the Stoney Filter Building. The total project includes upgrading the eight filters constructed in 1962, as well as the 12 filters placed into service in 1978. In total, the 20 filters have a treatment capacity of 91 mgd.

Participants heard a presentation of the evaluation process and selected design, followed by a tour of the filter building still in construction. Those participating in both the presentation and tour earned 2 CEUs for this event. Following the tour, LCD Gold Sponsor Garney Construction hosted a social at Wild Wing Cafe.

Jared Hartwig, P.E. of Hazen and Sawyer presented the need for the upgrade and the engineering evaluation. He detailed the rehabilitation process selection, and the alternatives for underdrain configurations considered. Design engineers used Computational Fluid Dynamic (CFD) modeling of the underdrain systems to evaluate alternatives and to test solutions to identified problems. The result is a filter ready not just for today, but optimized for flexibility in the future.

The project increases available bed expansion from 38.8% to 128%, for improved backwash.

Computational Fluid Dynamic Modeling Key to Selection and Design

CFD showed one alternative would produce poor distribution in the baseline model.

Another underdrain showed adequate distribution lateral to lateral, but indicated elevated pressures in the influent gullet.

Pressures were accounted for with an additional anchoring system.
Construction at a vital treatment plant that MUST remain in operation presents numerous challenges.

Rehab two by two

Taking the Stoney Filter Building off line for rehabilitation was out of the question. To make the necessary modifications, while maintaining operation of the plant at close to capacity, the construction company Garney removed filters from service two at a time. Scheduling and sequencing have to be precise to maintain schedule and operation.

Matt Reaves of Garney laid out the complexity of the construction and discussed the lessons learned, particularly in the construction of the first few pairs. As the teams became familiar with the work, subsequent pairs of filter improvements were streamlined. The sequencing method also allowed Garney to utilize “just in time” equipment delivery for the next filter pairs, and avoided requiring large lay down areas for equipment and supplies.

As each filter rehabilitation was complete, the pairs were thoroughly tested and placed into operation before the next pair was removed from service, maintaining essential capacity.

The Tour

The tour of Stoney Filter upgrade highlighted both the improvements and the construction sequencing.
STAY CONNECTED!

Be sure to check out all the events throughout the state at
www.scwaters.org.

Log in is simple. Your user name is the email for your membership (you should be getting regular email notifications from the Columbia office). Log in instructions are on the website.

LCD Thanks our 2016 Sponsors

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