



July 31, 2018

ANGELA LEE and EM SYREWICZE

Charlotte Water and Catawba Riverkeepers--Working for our Water



In a change from our normal format, Mike Hawley hosted a panel discussion with Angela Lee and Emilee Syrewicze to discuss Charlotte's water supply. Mike led off with a brief biography of each of them. Angela Lee is the director of Charlotte Water. A long-term employee of the City and of Charlotte water, Mike described her as "a big deal," overseeing an organization with some 950 employees, an annual budget of \$460 million, and over 8,600 miles of pipe.

Emilee Syrewicze, member and pianist of Charlotte Rotary is the Executive Director of the Catawba Riverkeeper Foundation, which is "a big deal as well." Em is a native of Michigan and received her BA in Political Science and Chemistry from Alma College, and her JD from the Vermont Law School.

After a brief video about Charlotte Water, Mike asked Em to tell about the Catawba Riverkeepers. Em explained that the non-profit organization serves the 26 counties that are part of the Catawba-Wataeree River Basin in North and South Carolina, with its mission being to educate, advocate and protect that river basin. They work to ensure that the water coming to Charlotte Water and other utilities is clean, plentiful, and affordable, and can be delivered to the public in the same manner.

Angela then described the work of Charlotte Water, beginning with the water intakes in Lake Norman (feeding the Duke water treatment plants) in Huntersville, and in Mountain Island Lake (feeding the Franklin WTP) in Charlotte. Raw water is stored, and then fed to the treatment plants, where it is filtered, treated, and tested before being distributed to some 1.2 million people in the service area. After the water is used, or "washed, brushed, or flushed," it enters the wastewater collection system, commonly called the sanitary sewer system, where it flows through pipes, assisted by some 80 lift stations (pumps that move the water uphill as needed) to one of five wastewater treatment plants. There, it is filtered and biologically treated to make clean and safe, at which time it is returned to the river. Angela noted that the water returned to the river is actually cleaner than the untreated water taken from the river at the intakes. She noted that this system is different from the storm sewer system, which simply captures rainwater and routes it to natural waterways with no need for treatment.

Em then displayed a map showing the Catawba-Wataeree Basin, which is 225 miles long, with 11 lakes (all of which are man-made 'impoundments' of water formed by the river and 14 dams), which provide power as well as water for 2.4 million people. Including tributaries of the main river, there are about 5,000 miles of waterways in the Basin, and the Catawba is listed as one of the 20 most endangered rivers in America. Today we are the 11th most

endangered, down from number 5 in 2015 and number 1 in 2008. This shows that the actions being taken to clean up and protect the river are working.

Even so, Em believes that currently 100% of the creeks and streams in Mecklenburg County are *impaired*, defined as being unfit for prolonged human contact. The Riverkeepers are working to monitor, clean up (removed 74,000 pounds of trash last year), and work with government agencies to improve storm water quality and minimize sewage spills.

Mike then asked Angela to talk about the customers served by Charlotte Water. There are approximately 285,000 separate accounts for water service, 88% of which are residential, with 3% being industrial and the remaining 9% being commercial and institutional. They currently pump an average of 120 million gallons of water per day. Water and sewer services are paid by consumers rather than through taxes, and are a bargain compared to most things. One dollar buys 257 gallons of high-quality water.

Mike noted that we are blessed with plentiful water, and there is not much population upstream of us, so why is it that we are designated as one of the most endangered rivers east of the Mississippi? Em responded that the key factors rated are water quality, water quantity, and water security. In our case, security is the major weakness, with rapid development, coal ash, runoff from agriculture (mainly poultry farms) and the “Energy/Water Nexus,” which is the amount of water used to generate power. This is a very large number, primarily because the impoundments along the river were designed not for supplying water for drinking, but to supply water for power generation, both hydro and to provide steam and cooling water for generating plants. The Catawba is the most “electrified” river in the country, with the highest concentration of power generating facilities.

Mike then pointed out that Kim Brattain worries about the water infrastructure and is “terrified” about a potential water main break in her neighborhood. Angela answered that there was no reason to fear, and that there is an ongoing program of rehabilitation/repair/replacement of piping and related facilities amounting to some \$20 million per year, and a five-year Community Investment Program budget of \$1.5 billion. They are targeting a 1% renewal rate for piping, although they are not up to that yet. While there is some very old piping still in place from the 1920’s, it is working just fine. Age is not the only factor in determining which pipes require rehab—quality of construction, frequency of leaks, type and size of pipe are other factors used in determining which piping to rehab.

Angela stated that Charlotte Water had the best water employees in the nation, rarely recognized for the fine job that they do. As the 17th largest water system in the Country, Charlotte Water requires a lot of dedicated people to keep the system working at a high level. They have every level of education, from GEDs to PhDs, and they all have a love of water and the people they serve.

Em was asked to describe the strangest things found in the Riverkeepers’ cleanup sweeps. These included multiple shopping carts, hundreds of old tires, over 20,000 sports balls, and one four-foot tall clown doll (scary!).

There was a question about what is being done to avoid issues with contamination of the water supply as seen last year in the eastern part of the state. Angela said that they are continuously studying and monitoring their source water for contaminants. Em pointed out that the Riverkeepers are continuously out on the water looking for evidence of problems and taking water samples. They are also working throughout the basin with five colleges and universities, as well as the US Geological Survey, to identify, study and monitor “emerging contaminants” to prevent them from reaching unsafe levels.

Final question was given that we are now pumping 120 million GPD, what is the current

maximum ability to supply, and how long before we need to worry about running out of water? Angela did not know the exact capacity number, but it is in excess of 200 million GPD. On the larger question, Charlotte Water is coordinating with 18 smaller utilities and Duke Energy to ensure that the water supply is adequate to sustain all of the service area. There is no expectation of a problem with sustainability before 2100. This doesn't mean we will run out of water then, but that we will need to plan now for conservation and develop infrastructure to support the increased population.

Thanks to Mike, Angela, and Emilee for a very informative and entertaining presentation!

Speaker Write-Up: Rick Handford; *Head Table:* Mike Hawley, Em Syrewicze, Angela Lee; *Invocation:* Angela Broome Powley; *Visitors & Guests:* Mark Norman; *Song:* Ed Pickett

CLUB NEWS

Update – **Dale Halton** has only resigned from the Board – she's remaining an active and fabulous member of the club. Yeah!

Kim McMillan's husband, Bill is participating in an event to benefit The Friends of the NASCAR Hall of Fame Foundation and The NASCAR Foundation. Not just any event...Bill has registered as a Champion Edger to rappel 10 stories – 100 feet – down the side of the Embassy Suites Charlotte Uptown during the Over the Edge Charlotte event on September 26, 2018. If you'd like to help him meet his fundraising goal of \$1000, check it out [here](#).

October 2, 2018 – Rotary Scholarship Golf Classic – Ballantyne Resort – the tournament is a fundraiser that provides college scholarships for families of our First Responders.



John Lassiter recognized recipients of the 9/11 Charlotte Rotary Scholarship – (left to right)

Kaitlyn Towery – daughter of Shane (Fire) and Shelley; attending Gardner Webb University.

Mackenzie Garlick – daughter of Glen (Fire) and Sonya; attending UNC.

Bailey Gardin – son of John and Polly (Police) Kitchens; attending Appalachian State University.

Madison Cherry – daughter of Ron Cherry (Fire) and Brenda Bell; attending Maryland Institute College of Art.

Ashley Pridgen – daughter of Robert (Sheriff) and Erika; attending Fayetteville State University.

Unable to attend: Madison Miller, Quentin Hooker, Mathew Lopez, Margaret Wagner

Following the events of 9/11, the club wanted to provide support through a scholarship fund for the sons and daughters of those who protect and serve our community. Since its inception, this event has raised almost \$800,000 and awarded over 80 multi-year scholarships to the families of our Charlotte-Mecklenburg First Responders.

Thank you note to the club from Barbara Robertson: *Dear Rotarians, **Tom Robertson** would be so pleased that you have made a memorial gift for him, and if possible, even more, that the gift went to our Educational Trust Fund at Virginia Tech. Your club does so many things to help others in many different situations. That fact was just one of the things that*

made him so proud to be a part of the Rotary family. Each of us – wife, 2 sons and their wives, and 3 grandchildren are very grateful to you for your memorial gift. They realize it will help a student become a part of a fine University. Go Hokies! Many thanks and blessings, Barbara Robertson

MEMBERSHIP

07/01/2018 288

07/31/2018 284

Net Increase: -4

New Members: Noelle Culler

Resignations: Gayle Sims, Ryan Taylor, John Powell, Frank Deaton, John Rodgers

Approve for Membership (comments to Rotary office by 8/7/18)

Howard R. Layson

Layson Logistics (Classification: Consultant, Business)

Sponsor: Jesse Hite

Endorsed: Sandy Osborne and Cabarrus County Rotary Club

Visitors 26

Club Members 116

Total 142 (47.4%)

Visitors & Guests: Annie & Megan Ding, Howard Layson, Denise Hallett, Dalton Shaull

BIRTHDAYS (08/08/18 – 08/15/18)

08/09 Marilyn Bowler

08/12 Ben Dobson

08/14 Howard Hoyle, Jr.

WEDDING ANNIVERSARIES (08/08/18 – 08/15/18)

08/10 Faye & Ron Campbell

08/11 Charlotte & John Shaver; Christy & Mark Majors

08/12 Karen & Mike DeAmicis

08/14 Kelly & Greg Reagan

ROTARY ANNIVERSARIES (08/08/18 – 08/15/18)

01 year - Margaret Marshall

03 years – John Shaver; Cheryl Banks

06 years – J.C. Cousar

14 years – Harriman Jett

17 years – Fred Brown; Wes Clark

19 years – George MacBain

UPCOMING PROGRAMS

08/07 **Jim Morgan**, Former Chairman and CEO, Krispy Kreme

08/14 **Jay Bryson**, Head International Economist, Wells Fargo

08/21 **Carol L. Folt**, Chancellor, UNC-Chapel Hill

08/28 **Bob McKillop**, Davidson Basketball Coach

Photos from our luncheons and other events can be found on Flickr [Click here](#)



charlotterotary.org 704.375.6816
1850 East 3rd Street | Suite 220 | Charlotte, NC 28204 USA
Rotary Club of Charlotte