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**Environmental Engineering**

**and Earth Sciences**

**EEES Department Seminar**

**New Plant, New Process?**

**Consideration of Granular Sludge at Charlotte Water**

**Dr. Muriel Steele**

Water Quality Program

Charlotte Water

Charlotte Water (CLTWater) has over 123 MGD of wastewater treatment capacity and is interested in sustainable and cost-effective technologies that may be selected for future capacity expansion. Aerobic granular sludge (AGS) is an innovative secondary wastewater treatment technology that can achieve biological nutrient removal (BNR) using specific biological and hydraulic selection pressures to produce and maintain AGS. CLTWater piloted AquaNereda, AquaAerobics AGS/sequencing batch reactor process, to understand how it might be used in place of another BNR technology at our new plant under design, the Stowe Regional Water Resource Recovery Facility (SRWRRF). The AGS pilot was performed at McDowell Creek WWTP from June 2019 to February 2020 to determine its viability as a treatment for CLTWater.

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This presentation will cover CLTWater’s motivations for exploring AGS, pilot effluent data, observations of granule formation and growth, and results of solids testing. Process selection for Stowe Regional WRRF and the future of AGS implementation at CLTWater will also be discussed.

**Bio:** Dr. Muriel Steele is a Water Quality Program Specialist in Charlotte Water’s Environmental Management Division. She has a PhD and MS in Environmental Engineering from Clemson University and a BS in Civil Engineering from Arizona State University. She is a licensed Professional Engineer in North and South Carolina. Prior to working at Charlotte Water, Muriel worked as a wastewater process engineer with CH2M/Jacobs.

**2:30 PM**

**Friday, October 1, 2021**

**Rich Lab Auditorium**

**Also available online via Zoom:**

<https://clemson.zoom.us/j/5783910968>

***Attendance is mandatory for graduate students enrolled in EES 8610, EES 9610, and GEOL 8510.***