



CSWEA
Webinar
Series

Wednesday – July 13, 2022
11 AM to 1:00 PM

Emerging Thermal Processes - Hydrothermal Carbonization, Pyrolysis, & Gasification

11:00 AM - **Introduction – Patrick McNamara, Ph.D., Black & Veatch**

11:05 AM - **Hydrothermal Carbonization at the Development of the Borough of Phoenixville WWTP** **Jeremy Taylor | Chief Sustainability Officer – SoMax Circular Solutions**

SoMax Circular Solutions, in partnership with the Borough of Phoenixville, is installing the first commercial-scale Hydrothermal Carbonization (HTC) process in the United States at the Borough of Phoenixville Wastewater Treatment Plant. HTC converts wet organic wastes, such as sewage sludge, into a carbon dense solid, known as Hydrochar. The HTC facility is currently under construction with commissioning set for later this year. This presentation will focus on the fundamentals of HTC, HTC's synergy with other waste conversion technologies, the pursuit of beneficial use permitting of the hydrochar, and updates on project implementation.

11:35 PM - **EPA Testing of Bioforcetech System Shows Reduced PFAS, PFOA, PFOS to Non-Detect Levels** **Valentino Villa | COO, Bioforcetech Corporation**

The accumulation of microplastics, PFAS, PFOA, and PFOS in wastewater effluents puts our industry in a unique position to aid in the removal of these substances from our environment and population. Our team at Bioforcetech has taken the microplastics and PFAS issue as a personal challenge to overcome, and we are proud to share that third party, independent testing conducted on our technology shows considerable promise for its ability to successfully eliminate these harmful substances from input materials completely. The tests conducted on our biochar samples by the EPA Task Force in August of 2020 confirmed undetectable levels of 41 PFAS, PFOA, and PFOS compounds that the task force tested. The results of multiple tests conducted and confirmed to remove CEC's by different constituents shows great promise for the ability of our system to remove PFAS, PFOA, and PFOS from biosolids.

1:45 PM - **Panel Q&A with all presenters**

12:05 PM - **Auto-Thermal Gasification and Biosolids Drying: Achievements and Lessons Learned from a Three-Year Pilot at a Pennsylvania WWTF (>1.3 wet metric tons/hr)**

Chris Holcomb | Inside Sales Manager and Business Development Analyst, Ecoremedy

Ecoremedy provides integrated on-site drying and gasification of dewatered biosolids at municipal WWTFs as a non-SSI technology. The system provides >90% volume reduction and real-time end-product flexibility: the system can maximize production of dried Class A, biochars with custom carbon content, or maximum reduction to the ash-fraction with non-detect levels of 36 types of PFAS. Ecoremedy's affordable, energy-positive systems can meet the needs of small towns and large cities, even when space is limited at the WWTF, including compact skid-mounted systems. This presentation will provide an overview of the technology. It will then summarize data from the Morrisville Project (2018-2021) in PA, a full-scale demonstration that achieved a sustained hourly throughput of 1.5 wet tons per hour. It will also review the Edmonds Project near Seattle, which is currently being installed in an existing incinerator building with a design capacity of 14,250 wet tons per year, with co-gasification of grit and screenings.

12:35 PM - **Q&A With Speakers**

1:00 PM – **Adjourn**



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Speakers



Jeremy Taylor
Chief Sustainability Officer
SoMax Circular Solutions



Valentino Villa
COO
Bioforcetech Corporation



Chris Holcomb
Inside Sales Manager and Business Development Analyst
Ecoremedy