



CSWEA
Webinar
Series

Wednesday – January 15th, 2025

11:00 AM to 12:00 PM CST

Implementation of Primary Sludge and Biomass Fermentation for Improved Biological Phosphorus Removal at the Delafield-Hartland WWTP

Facing a more stringent effluent total phosphorus (TP) limit, the Delafield-Hartland Water Pollution Control Commission (DelHart) initiated a study to evaluate potential modifications to improve biological phosphorus removal (BPR) performance. While originally designed for BPR, the WWTF was not able to successfully achieve BPR with its previous University of Cape Town process. Following an evaluation of alternatives including process modeling, DelHart proceeded with implementation of primary sludge fermentation and modifications to the activated sludge system to increase the anaerobic mass fraction along with implementing biomass fermentation. New high speed turbo blowers with ammonia-based aeration control were also implemented. Construction on these improvements began in December 2022 and are scheduled to be operational in January 2024.

Agenda

- 11:00 AM** - Introduction
- 11:05 AM** - Presentation
- 11:45 AM** - Q&A
- 12:00 PM** - Adjourn

CONTINUING EDUCATION

1.0 CEUs for Operators in Illinois, Wisconsin & Minnesota.
Operator ID/Quiz required for webinar.

1.2 PDHs for all Professional Engineers

COST

- \$25 – Members (Discount Code: CSWEA)
- \$35 – Non-Members
- \$10 – Student (Discount Code: Student)
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PRESENTED BY:



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Nick Bartolerio, P.E. is a wastewater process engineer at Strand Associates, Inc.® based in their Madison, Wisconsin office. Nick graduated from the University of Wisconsin-Madison with a B.S. degree in Civil Engineering and the University of Illinois at Urbana-Champaign with an M.S. degree in Civil and Environmental Engineering. Nick has over twelve years of experience in modeling, design, and operation of nutrient removal processes and is a registered Professional Engineer in Illinois, Wisconsin, and Iowa.