



Massachusetts Water Pollution Control Association

Nutrient Removal Using Computer Modeling

As the current utility workforce ages, new training techniques are needed as we transition to the next generation of professionals. This workshop will cover, via a combination of lecture material and hands-on use of a process simulator, the fundamental concepts of operating an activated sludge plant to achieve nutrient removal.

The lecture portion of the class will cover the fundamentals of biological nitrogen and phosphorus removal as well as various approaches to chemical phosphorus removal. Various process configurations will be investigated and material on both established and new technologies will be investigated. The lecture portion of the class will be followed up with the attendees working in small groups under the guidance of the instructors with computerized treatment process models to troubleshoot different plant configurations and operating conditions. The state of the art software used in the class is based on the program GPS-X developed by Hydromantis. This program is commonly used for treatment process evaluation and design but has been enhanced to serve as a platform for plant O&M manuals and operator training.

May 23, 2019

**Time: 8:30 am—3:30 pm
Lunch Provided**

**Richard Alden Training Center
Nippnapp Trail
Millbury, MA**

**\$100 Members
\$150 non-members
(includes MWPCA Membership)**

**6 TCHs will be awarded to
those who attend**



Learner Outcomes:

- Understand the fundamental concepts of operating an activated sludge process to achieve nutrient removal
- Improve your ability to troubleshoot nutrient removal treatment processes problems
- Use a simulator to experiment with various process control concepts to improve plant performance

Level: Intermediate; working knowledge of subject matter



Paul Dombrowski
Chief Technologist
Woodard & Curran
Enfield, CT



Amine Hanafi
Process Engineer
Woodard & Curran
Enfield, CT



Aaron Brennan
Project Engineer
Woodard & Curran
Enfield, CT

**Registration 8:00 am
Seating limited to 26**

Course: Nutrient Removal Using Computer Modeling

Attendee: _____

Business/Facility: _____

Address: _____

City, State, Zip: _____

Phone: () _____ E-mail: _____

Payment: \$ _____ Course Cost : \$100.00 Members/ \$150.00 Non-Members* (includes membership)

MWPCA Membership #: _____ MA License #: _____

Credit Card Payment ? Fill out form on page 2 please PO Number _____

Registration: Send check or cc payment to MWPCA for full amount at least 7 days prior to training date. Seating is limited, register early.

Send forms to: MWPCA, PO Box 561, Monson, MA 01057 or Fax: 774-670-9956 (checks payable to MWPCA)

Confirmations: Will be emailed

Questions: Mickey Nowak at 774-276-9722

Note: Training is subject to cancellation in the event of low participation numbers. You'll only be notified if the class is cancelled.

Richard Alden Training Center, Millbury MA

DIRECTIONS:

The Richard Alden Training Center is located in Millbury, MA on Route 20 approximately 1/4 mile West from the intersection of Routes 20 and 146. The facility is located on the grounds of the Upper Blackstone Water Pollution Abatement District (UBWPAD).

From the MA Pike Exit 10A:

1. Go left at first set of lights.
2. Go straight at the next set of lights.
3. Left at next set of lights on to Route 20 west.
4. Right on the next set of lights on to Nippnapp Trail.
5. Take the first right off Nippnapp Trail
6. Trainees should park in the lot outside of the entrance gate..
7. Walk through the gate and proceed straight ahead to the Alden Training Center (Blue / Brick Building).

From Rte 146 North or South:

1. Take Route 20 west.
2. Right on the set of lights at Nippnapp Trail.
3. Take the first right off Nippnapp Trail
4. Trainees should park in the lot outside of the entrance gate..
5. Walk through the gate and proceed straight ahead to the Alden Training Center (Blue / Brick Building).

**Using a GPS device? enter the address
7 Nippnapp Trail, Worcester, MA.**

After turning into the entrance of the plant from Nippnapp Trail, the Training Center parking lot will be your first left before the security gate. There is a pedestrian walkway out of the parking lot leading to the Training Center.



Paying with a Credit Card?

Card Number _____

Expiration (MM/YY) _____

CCV Number _____

Billing Address Zip Code _____