

# #978 Biological Nutrient Removal in the Activated Sludge Process

## 5.5 WASTEWATER CONTACT HOURS

The course provides an in-depth review of the bacteria, operational conditions and biological principles that influence nitrification, denitrification and biological phosphorus removal. The course also provides biological, chemical and physical measures for monitoring and regulating BNR for permit compliance, process control and cost-effective operation. Required, desired and accidental occurrences of nitrification and denitrification are presented. Troubleshooting and correctiveness measures for accidental nitrification and denitrification also are presented.

### Topics to be covered:

- Biological principles of nitrification
- Nitrogenous wastes and their impact upon the treatment process
- Benefits of denitrification
- Oxic, anoxic and anaerobic respiration

# July 17, 2019

**Chestnut Ridge Golf Resort**  
1762 Old William Penn Highway  
Blairsville, PA 15717  
**Indiana County**

**Class Time:** 8:00 am - 3:30 pm  
**Registration:** 7:30 am  
*Lunch and materials provided  
with your registration*

**Instructor: Michael Gerardi**  
*Wastewater Microbiologist*

**Questions?**  
Call 800-653-7792 ext. 107 or 108  
Or email: Training@PRWA.com  
**WE HOPE TO SEE YOU THERE!**

### THE PRWA PROMISE

If you're not 100% satisfied with the training class for any reason, we will give you a refund!

**WWW.PRWA.COM/PROMISE**

**Attendance cost per person:**  
\$195 for PRWA Members  
\$230 for Non-Members

**PRWA Member?**  Yes  No

Name: \_\_\_\_\_ PA-DEP Client ID (if applicable): \_\_\_\_\_

System/Company: \_\_\_\_\_ Phone: \_\_\_\_\_

Address:  Home  System Fax: \_\_\_\_\_

City \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Email: \_\_\_\_\_

### PAYMENT:

Check (payable to PRWA)

Invoice Me:  Home  System

Credit Card:  AmEx  Discover  Visa  MasterCard

Card Number: \_\_\_\_\_

Exp Date (mm/yy): \_\_\_\_\_ CVC (3 or 4 Digit # on card): \_\_\_\_\_

Name on Card (Please print): \_\_\_\_\_

Signature: \_\_\_\_\_

Amount Due:  
\$ \_\_\_\_\_

To register by FAX or MAIL:

FAX: 814-353-9341

MAIL: 138 W. Bishop St., Bellefonte PA 16823

EMAIL: TRAINING@PRWA.COM

EMAILING REGISTRATIONS: EMAIL IS INHERENTLY INSECURE. CREDIT CARD INFORMATION SHOULD NOT BE EMAILED OR SENT IN AN ATTACHMENT.

**Questions?**

Call 800-653-7792 ext. 107 or 108

**July 17, 2019**

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Location:

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**Indiana County**

*Signature shown on card*

## MEET THE INSTRUCTOR



**Michael Gerardi**  
*Wastewater Microbiologist*

Michael has developed and offered numerous wastewater biology courses in the United States, Canada, Caribbean and Europe. He has over 35 years experience in the wastewater treatment profession and has authored seven wastewater microbiology texts for John Wiley and Sons. He has performed microscopic analyses of wastewater samples and provided troubleshooting services for numerous municipal and industrial wastewater treatment facilities. He managed the Williamsport Sanitary Authority wastewater treatment facilities for 10 years.

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**Chestnut Ridge Golf Resort  
Indiana County**

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**pa rural water**  
*Association*

138 West Bishop Street  
Bellefonte, PA 16823  
800-653-7792

**WWW.PRWA.COM**

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CONTACT HOURS**

**pa rural water**  
*Association*