

**#3019**  
**Activated Sludge: Settleability**  
**Problems and Loss of Solids**

**#3563**  
**Nitrification**

**6 WASTEWATER CONTACT HOURS**

**Activated Sludge: Settleability Problems and Loss of Solids:** This course provides a review of the identification, causative factors and control of commonly occurring settleability problems and loss of solids in secondary clarifiers that contribute to permit violations, foam production, increased operational costs and loss of treatment efficiency.

**Nitrification:** This course will review the biological principles of nitrification and their application for process control, troubleshooting, permit compliance and cost-effective operation in the activated sludge process.

**Topics to be covered:**

- Undesired filamentous growth
- Nutrient deficiency
- Denitrification
- Role of organotrophic bacteria during nitrification
- Importance of cBOD removal
- Types of BOD and their impact

**May 23, 2019**

**Best Western Inn**  
**& Conference Center**  
82 North Park Place  
Dubois, PA 15801  
**Clearfield County**

**Class Time:** 8:00 am - 4:00 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**

**Location:**

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**& Conference Center**  
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**Clearfield County**

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#3019 - Activated Sludge: Settleability Problems and  
Loss of Solids  
#3563 - Nitrification

**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: \_\_\_\_\_

**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

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

*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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## Activated Sludge: Settleability Problems and Loss of Solids

### Nitrification



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*Association*

138 West Bishop Street  
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