

#7391  
Intermediate Applied Math for  
Drinking Water and Wastewater -  
Part II

6 WATER AND WASTEWATER CONTACT HOURS

Operators are required to complete various math calculations to assist in operations within a treatment facility. This course instructs students on calculations required during the operation of a water or wastewater treatment facility. Calculations include detention time, contact time, filter capacity, loading rates, pressure, head, horsepower, F/M, Sludge Age, Solids Retention Time, Loading Rates, Geometric Mean, and Sludge Volume Index are some of the topics to be covered.

**Important!**

**Masks are required by all attendees at  
PRWA training seminars.**

*Prior Authorization is required by our office if you  
are unable to wear a mask.*

**MEET THE INSTRUCTOR**



**Wendy Malehorn**

*Training and Educational  
Development*

Wendy is a Training & Education Development Specialist. Wendy has worked in the water industry since 1997, when she became a licensed water operator. Wendy's experience comes from being a trainer for PRWA, PA DEP and Penn State as well as hands on experience with various local systems, including a small system in Snyder County. Wendy holds a B.S. in Public Health with a concentration in Environmental Health from West Chester University.

**November 10, 2020**

**Middlesex Township  
Municipal Authority**  
350 North Middlesex Road  
Carlisle, PA 17013  
**Cumberland County**

**Class Time: 8:00 am - 3:30 pm**

**Registration: 7:30 am**

*Lunch and materials provided with  
your training class registration*

**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**

**Method 334.0**

***Is it time for your instruments Routine Calibration Verification?***

In September 2009, the Environmental Protection Agency (EPA) published Method 334.0. In 2018, the Pennsylvania Department of Environmental Protection (DEP) required compliance of Method 334.0. Specifically, Pennsylvania drinking water systems are expected to follow Method 334.0 if they use a handheld, benchtop or on-line chlorine analyzer for any of the following:

- compliance monitoring at both the entry point and in the distribution system;
- monitoring used to obtain results for calculating log inactivation;
- or chlorine monitoring required as part of a permit condition.

In short, all community water systems and any noncommunity water system with surface water or 4-log treatment are required to follow Method 334.0.

To verify on-line analyzers and become Method 334.0 compliant systems must complete:

- The field sampler initial demonstration of capability. This is required for any individual who conducts chlorine analysis at the water system.
- The initial calibration verification is required for any handheld or benchtop analyzer used for chlorine analysis or used for comparison grab sampling within Method 334.0.
- Routine calibration verifications are required quarterly (at least every 90 days) for any handheld or benchtop analyzer used for chlorine analysis or used for comparison grab sampling within Method 334.0.

Many systems have done initial demonstration of capability for individuals who conduct chlorine analysis and have completed initial calibration verifications. To maintain Method 334.0 compliance, systems must complete Routine Calibration Verifications.

**PRWA will have staff at this training seminar to perform Routine Calibration Verifications for participating systems instruments.**

Operators can choose to attend only the seminar, attend the seminar and have equipment verified, or just have the equipment verified.

In addition to the instrument in need of routine calibration verification, paperwork specific to method 334.0 will be needed including:

- Initial calibration verification
- And, if completed at any time, quarterly instrument verification

In addition to the instrument(s) to be verified, the PRWA staff will need clean sample glassware. Additionally, if the instrument cannot be verified using a DPD pillow packet, the specific chemical/reagent needed should be provided.

**Cost:**  
**\$39 per Instrument**

**Questions?**

Call (800) 653-7792 ext. 107 or 108  
Or email: Training@PRWA.com

# Registration Form

November 10, 2020

#7391 - Intermediate Applied Math for Drinking Water and Wastewater - Part II

Please select an option:

- Training Class Only
- Method 334.0 Quarterly Verification Only
- Both Training Class & Method 334.0 Quarterly Verification

Location:

**Middlesex Township Municipal Authority**  
 350 North Middlesex Road, Carlisle, PA 17013  
**Cumberland County**

Number of Instrument(s):   
 \$39 per instrument

*\*In addition to clean sample vial, do not forget to bring Initial Calibration Verification & Routine Calibration Verification paperwork for each instrument to be verified.*

Name: \_\_\_\_\_

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

System/Co.: \_\_\_\_\_

Phone: ( ) \_\_\_\_\_ Fax: ( ) \_\_\_\_\_

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

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

### 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): \_\_\_\_\_

Card Billing Zip Code: \_\_\_\_\_

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

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

PRWA Member?  Yes  No

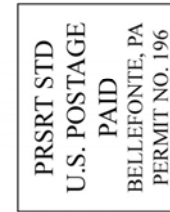
#### Attendance cost per person:

\$95 for PRWA Members  
 \$130 for Non-Members

\$39 for Instrument Verification  
 (per instrument)

Amount Due:

\$ \_\_\_\_\_



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

WWW.PRWA.COM

For the most up to date information,  
 check out **WWW.PRWA.COM**

Also, find us on social media.  
**Search: PA Rural Water**

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 SEND IN AN ATTACHMENT.

### Questions?

Call (800) 653-7792 ext. 107 or 108

# Intermediate Applied Math for Drinking Water and Wastewater Part - II

*Including Method 334.0  
 Quarterly Verification*



**6 WATER AND WASTEWATER  
 CONTACT HOURS**

