

### Basic Math for Water and Wastewater Operators

Dates & Locations (choose one):

- July 9, 9:00am-12:30pm, Vermont Rural Water Association, 20 Susie Wilson Rd, Essex Junction, VT
- August 20, 9:00am-12:30pm, Newport Fire Department, 350 Western Avenue, Newport, VT
- September 27, 9:00am-12:30pm, Vermont Rural Water Association, 20 Susie Wilson Rd, Essex Junction, VT

Credit: 3 TCH



Non-member cost: \$30



Member cost: \$24

Instructor: Matt Guerino (VRWA)

This is a basic math course for water and wastewater operators. The formulas covered in this class will be area, volume, psi, temperature and detention time.

### Chemical Feed Pumps

Date: July 24, 2019

Time: 9:00am-12:30pm

Location: Grand Isle State Park, 31 Knight Point Road, North Hero, VT

Credit: 3 TCH

Non-member cost: \$30

Member cost: \$24



Instructor: Dave Harris (Ti-Sales)

Proctor: Matt Guerino (VRWA)

This seminar covers the proper operation and troubleshooting of chemical feed pumps used in water systems. Also covered are types of pumps, sizing, chemical strength, chemical control, and system chemicals.

### NEW The Chemicals of Water Treatment Workshop

Date: July 25, 2019

Time: 9:00am-12:30pm

Location: Vermont Rural Water Association, 20 Susie Wilson Rd, Essex Junction, VT

Credit: 3 TCH



Non-member cost: \$30

Member cost: \$24

Instructor: Ray Solomon (DEC, DWGWPD)

Proctor: Matt Guerino (VRWA)

This workshop is designed to be a discussion with Water Treatment Plant operators on the common chemicals used at Vermont's water treatment plants. Chemicals discussed will be those used for coagulation, such as alum, polyaluminum chloride and organic polymers; oxidation, such as chlorine and permanganate; and corrosion control, such as sodium hydroxide, sodium carbonate, orthophosphate and polyphosphate. For each chemical, we will explore its properties, chemistry, and use. Attendees should be prepared to discuss their own experience with chemicals they use, including how they are stored, fed into raw and finished water, and monitored. This workshop will emphasize how to recognize and deal with problems related to the use of treatment chemicals.

### Corrosion Control

Date: August 8, 2019

Time: 9:00am-12:30pm

Location: Public Works Office, 78 Bowen Road, Bennington, VT

Credit: 3 TCH

Non-member cost: \$30



Member cost: \$24

Instructor: Ryan Peebles (Clean Waters, Inc)

Proctor: Matt Guerino (VRWA)

What are the corrosion issues water operators face? This training session will focus on distribution system corrosion and methods to combat it. Topics covered will include: what is corrosion and what causes it, why some waters are more corrosive than others, problems corrosion causes, lead and copper rules, and using phosphates and pH adjustment to combat corrosion.

### Water and Wastewater System Ethics

Date: August 27, 2019

Time: 9:00am-1:30pm

Location: Vermont Rural Water Association, 20 Susie Wilson Rd, Essex Junction, VT

Credit: 4 TCH



Non-member cost: \$40

Member cost: \$32



Instructor: Matt Guerino (VRWA)

This class reviews ethical behavior and its importance as a Water or Wastewater Operator. The course will identify what constitutes unethical behavior and the penalties that accompany this conduct. In addition, there will be a discussion of examples of improper practices and review of correct procedures.

#### Key



= approved for water credit



= approved for wastewater credit

Follow us on  
Twitter @vtrwa



## Advanced Operator Certification - Class 3 & 4

Date: September 4, 11, 12, 18, 19, 25 and October 2, 3, 9, 2019

Time: 9:00am-2:30pm

Location: Rutland Regional Planning Commission, 67 Merchants Row, Rutland, VT

Credit: 45 TCH



Non-member cost: \$225 (plus \$265 for books)

Member cost: \$180 (plus \$265 for books)

Instructors: Matt Guerino (VRWA) and other presenters

This certification program is designed for those training to become new Class 3 & 4 operators. The program will prepare individuals to take the Vermont State Class 3 & 4 water operator certification exams. All aspects of water operations are covered during this multi-week course. Attendees are expected to be present at all of the given sessions. The following texts are required for this course and can be ordered directly from VRWA: (1) AWWA Water Treatment, (2) AWWA Water Treatment Operator Training Handbook, (3) AWWA Operator Certification Exam Prep and (4) Math Handbook for Water System Operators.

## Distribution Course — Class D

Date: September 4, 5, 11, 18, 19, 26, 2019

Time: 9:00am-2:30pm

Location: Rutland Regional Planning Commission, 67 Merchants Row, Rutland, VT



Credit: 30 TCH

Non-member cost: \$150 (plus \$245 for books)

Member cost: \$120 (plus \$245 for books)

Instructors: Matt Guerino (VRWA) and other presenters

This course is designed for those involved with the distribution of potable water and who are seeking a Class D certification. The texts for this course will be: (1) AWWA Water Distribution, (2) Math Handbook for Water System Operators, (3) AWWA Water Distribution Operator Training Handbook, and (4) AWWA Operator Certification Exam Prep. Topics in this class will include: distribution certification, Water Supply Rule, water sampling procedures, basic water chemistry, water hydraulics, distribution system design, tank design, blueprint reading, pumps and pumping, valve operation and maintenance, cross connections, hydrants and flushing program, meters and backflow, leak detection, VOSHA regulations, instrumentation and controls and water mathematics.

## NEW How To Handle The Media—In Good Times and In Bad

Date: September 11, 2019

Time: 9:00am-1:30pm

Location: Vermont Rural Water Association, 20 Susie Wilson Rd, Essex Junction, VT

Credit: 4 TCH



Non-member cost: \$40



Member cost: \$32

Instructor: Kirsten King (NEWWA Executive Director)

Proctor: Elizabeth Walker (VRWA)

Public relations and crisis communications are often overlooked at the utility setting. However, by being proactive with both public relations, and incorporating social media, a utility can establish positive and productive relationships with their customers, city/town officials, news reporters, and the general public. This award-winning course was developed to provide water utility employees with practical, classroom-based instruction supplemented with interactive exercises on how to conduct a well-rounded public/media relations program.

## NEW Operation, Maintenance and Troubleshooting of Pretreatment Facilities

Date: September 17, 2019

Time: 9:00am-12:30pm

Location: Vermont Rural Water Association, 20 Susie Wilson Rd, Essex Junction, VT

Credit: 3 TCH



Non-member cost: \$30

Member cost: \$24

Instructor: Michael Smith, PE (Weston & Sampson)

Proctor: Elizabeth Walker (VRWA)

Why pretreatment is necessary, maintenance, operation, troubleshooting and do's and don'ts at your facility. Although this session is geared towards operators of pretreatment facilities, it will be useful to operators to better understand how these facilities are operated.

## Optimize Your Water and Wastewater Pump Stations

Date: September 18, 2019

Time: 9:00am-12:30pm

Location: City of St. Albans Fire Department, 30 Lower Welden Street, St. Albans, VT

Credit: 3 TCH



Non-member cost: \$30



Member cost: \$24

Instructor: John Benham (Pump Systems Inc.)

Proctor: Wayne Graham (VRWA)

Water and Wastewater operators and managers will learn how to effectively maintain and operate pump stations. Electrical components and failures will be covered in detail. We will cover basic hydraulic principles of centrifugal pumps, focusing on common problems and learning to detect, troubleshoot, and make repairs. Proper planning will prepare you for breakdowns and the unexpected. This is a great class for exam preparation.

## Understanding Your Motor Control Panels

Date: September 19, 2019

Time: 9:00am-2:00pm

Location: City of St. Albans Fire Department, 30 Lower Welden Street, St. Albans, VT

Credit: 4 TCH



Non-member cost: \$40



Member cost: \$32

Instructor: John Benham (Pump Systems Inc.)

Proctor: Wayne Graham (VRWA)

Water and wastewater operators, while not electricians, need to understand these critical components and possess the skills to troubleshoot problems. This is also a great review class for exams as electrical theory, formulas and safety will be covered in detail. This is a hands on class, work stations with actual control panels will be used. Please bring your voltage/amp meter if you have one.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9 Basic Math	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24 Chemical Feed Pumps	25 Chemicals of Water Treatment	26	27
28	29	30	31			

# August 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6 Basic Math	7	8 Corrosion Control	9	10
11	12	13	14	15	16	17
18	19	20 Basic Math	21	22	23	24
25	26	27 System Ethics	28	29	30	31

# September 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4 Advanced Operator Class 3/4/D	5 Advanced Operator Class D	6	7
8	9	10	11 Advanced Operator Class 3/4/D; Handling the Media	12 Advanced Operator Class 3/4	13	14
15	16	17 Pretreatment Facilities	18 Advanced Operator Class 3/4/D; Pump Stations	19 Advanced Operator Class 3/4/D; Motor Control Panels	20	21
22	23	24	25 Advanced Operator Class 3/4	26 Advanced Operator Class D	27 Basic Math	28
29	30					



Bob Fischer, Water Quality Superintendent, conducts a tour of the South Burlington wastewater treatment facility on Water Quality Day, Thursday, May 30th, 2019

## Registration Information

**Deadline:** Two business days before course date. Registrations received less than two days before a session are subject to a \$20 late fee. **No walk-ins allowed. Sign-in begins 15 minutes before the start of the course.**

Register on the web:

**[www.vtruralwater.org](http://www.vtruralwater.org)**

Register by mail: Complete the form below and send it with a check or money order for the full amount to:

**VRWA  
20 Susie Wilson Road, Suite B  
Essex Jct., VT 05452**

Register by fax: You may complete the form below and fax it to **866-378-7213**.

**Seating is limited, so register early. Your cancelled check confirms your registration; you will only be notified if the course is cancelled.**

### Fees

Due to government support secured by VRWA, we are able to offer courses at a reduced rate. The actual training is free of charge, but all courses have a materials fee.

### Cancellations / Refunds

If you will be unable to attend a class, you must contact our office at least 24 hours in advance to receive a refund.

### Member rate

VRWA member systems receive a 20% discount. To join VRWA, call 802-660-4988 or visit [www.vtruralwater.org](http://www.vtruralwater.org).

### Special needs

Please contact us at 802-660-4988 prior to your class if you have any special needs.

### Credit

Training Contact Hours (TCHs) are awarded for all training courses. These are applicable for operator certification in Vermont. You must attend 100% of the course in order to receive TCHs. Course objectives determine whether credits are applicable to a water operator or a wastewater operator's certification; some courses apply to both types of certification. **All attendees will receive a record of TCHs earned after completing a course.** Reprints of lost TCH certificates are available for a fee.

## Registration Form

**Duplicate this form to sign up for more than one course.**

Course Name \_\_\_\_\_

Date & Location \_\_\_\_\_

Attendee Name(s) \_\_\_\_\_

Facility/Business \_\_\_\_\_ **WSID# or WW#** \_\_\_\_\_

Address \_\_\_\_\_

City, State, Zip \_\_\_\_\_

Phone \_\_\_\_\_ Emergency Phone (for cancellations due to weather): \_\_\_\_\_

Email \_\_\_\_\_

Total Payment Enclosed \_\_\_\_\_

**Questions? Call 802-660-4988.**



**Vermont**  
**Rural Water Association**

20 Susie Wilson Rd., Ste. B  
 Essex Jct., VT 05452-2827  
[www.vtruralwater.org](http://www.vtruralwater.org)

Non Profit Org.  
 US Postage  
**PAID**  
 Burlington, VT  
 Permit No. 332

**CURRENT RESIDENT OR**

**IMPORTANT WATER & WASTEWATER OPERATOR  
 TRAINING ANNOUNCEMENT ENCLOSED**

Do not discard until September 30, 2019.

To view the most current training schedule, visit [www.vtruralwater.org](http://www.vtruralwater.org)

**Membership**

VRWA membership provides the following benefits to your system:

- Preferred scheduling for onsite visits
- Phone consultations
- Source protection planning
- Quarterly training announcements
- Quarterly newsletter
- 20% discount on all applicable fees
- Free classified ads on VRWA's website
- Networking opportunities
- Representation for your system at the state and national level
- Advocacy for continuation of rural water programs and services