

## NEW Down-Well Camera Exploration

Wednesday, October 9 9:00 am - 12:30 pm  
Location: Burke Mountain Hotel  
2559 Mountain Rd, East Burke, VT

**W** 3 TCH

Member Cost: \$24 Non-member cost: \$30  
Instructor: Jeff Hoffer Proctor: Diana Butler, VRWA

This is a field course designed to explore the structure and function of groundwater wells in Vermont, led by hydrogeologist Jeff Hoffer. We will examine two wells at this onsite location using down-well cameras. Some classroom time will be spent on individual water system source discussion and troubleshooting.

## NEW Wastewater Microbiology

### A Wastewater Microbiology Monitoring Program for Operators

Wednesday, October 9 8:30 am - 3:30 pm  
Location: Hartford Municipal Building  
171 Bridge St, White River Junction, VT

**WWW** 6 TCH

Member Cost: \$96 Non-member cost: \$120  
Instructor: Toni Glymph Proctor: Elizabeth Walker, VRWA

Learn the role of bacteria, protozoa and metazoa in the treatment process along with the conditions that allow them to do their best work of removing nutrients from wastewater. Topics will include microbiota identification, development of a wastewater microbiology monitoring program, how to foster system conditions that favor the growth of phosphorus-accumulating microorganisms (PAOs), and how to troubleshoot existing treatment system problems.

The course workbook, *Wastewater Microbiology Laboratory Manual for Operators* by Toni Glymph, is recommended but not required. It will be available at the training for \$50.

## Wastewater Sampling & Laboratory Procedures

Thursday, October 10 8:30 am - 3:30 pm  
Location: Rutland WWTP - Training Room  
110 Green Hill Ln, Rutland, VT

**WWW** 6 TCH

Member Cost: \$48 Non-member cost: \$60  
Instructor: Andy Fish Proctor: Elizabeth Walker, VRWA

A great class for new operators or those needing a refresher on sampling. We will be covering sampling locations, proper lab techniques, equipment calibrations, quality assurance, calculations and reporting practices for the analysis of pH, total residual chlorine, and settleable solids. Instructor Andy Fish has been evaluating laboratory procedures for over 25 years.

## Small Systems Class 2 Water Operator Certification Course

October 16, 18, 23, 24 9:00 am - 2:00 pm  
Location: Montpelier Public Works Garage  
783 Dog River Rd, Montpelier, VT

*Parking across the street at the Recreation Field*

**W** 18 TCH

Member cost: \$188\* Non-member cost: \$235\*  
Instructor: Matt Guerino, VRWA \*Cost includes textbook

This course is designed for those who will be taking the VT Class 2 Water Operator Certification Exam. The four-session class provides an overview of how to operate a small public water system using groundwater as a source. Topics include the Safe Drinking Water Act requirements, sampling water sources, well construction, source protection, water storage, distribution, hydraulics, cross-connections, safety, disinfection, treatment, and relevant math. This class is not designed for the operators of Transient Non-Community Systems (TNCs).

## TNC Coliform Sampling Class

Tuesday, October 22 9:00 am - 12:30 pm  
Location: VT Department of Health Laboratory  
359 S Park Dr, Colchester, VT

**W** 3 TCH

Member Cost: \$24 Non-member cost: \$30  
Instructor: Meredith Maskell & Bridget Phillips, DWGWP  
Proctor: Diana Butler and Tim Russo, VRWA

This is a detailed training session about total coliform bacteria sample collection and analysis for transient non-community (TNC) water system operators. Topics will include monitoring schedules, sample locations, best practices for sample collection and handling, coding for laboratory paperwork, and other topics relevant to total coliform bacteria monitoring. We will tour the Vermont Department of Health laboratory for a behind-the-scenes look at sample receipt, analysis, and reporting.

### Key

TCH = Training Contact Hours

**W** = Approved for Water Credit

**WWW** = Approved for Wastewater Credit



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# Course Catalogue

## Interpreting Your Permit: Phosphorus TMDL Primer

Wednesday, October 23 9:00 am - 12:15 pm  
Location: Waterbury Municipal Office, Steele Community Room  
28 N Main St, Waterbury, VT

**WW** 3 TCH

Member Cost: \$24 Non-member cost: \$30  
Instructor: Amy Polaczyk and Dave DiDomenico, DEC  
Wastewater Management

Proctor: Elizabeth Walker, VRWA

This session will explain the recently issued Lake Champlain NPDES draft permits. DEC Wastewater Program staff will outline information contained in the fact sheets such as phosphorus waste load allocation determinations and other discharge limitations and monitoring requirements. Additional topics will include requirements in the permits for phosphorus optimization plans, phosphorus elimination/reduction plans, WET testing, non-compliance notifications, total and annual waste load reporting, proficiency testing, and more.

## Comprehensive Water & Wastewater Chemistry With Jar Testing Basics

Thursday, October 24 8:30 am - 3:30 pm  
Location: Hyde Park Town Office, Community Meeting Room  
344 VT 15 West, Hyde Park, VT

**W WW** 6 TCH

Member Cost: \$48 Non-member cost: \$60  
Instructor: Loren Swears, Slack Chemical Co.  
Proctor: Elizabeth Walker, VRWA

This course will discuss all aspects of water chemistry, including pre-oxidation, coagulation, flocculation, pH control, disinfection, dewatering, and corrosion control. We will also cover jar testing basics, such as math for dilutions, parameter testing, and calculation of pump settings for scale up to production.

## Exam Preparation Course (Class 3/4/D)

Tuesday, October 29 9:00 am - 2:00 pm  
Location: Rutland Regional Planning Commission  
67 Merchants Row, Rutland, VT

**W** 4 TCH

Member Cost: \$32 Non-member cost: \$40  
Instructor: Matt Guerino, VRWA

This course is designed as a short review for the Class 3, 4 and D water operator certification exam. We will review test-taking skills, math questions, exam questions, and general water system operator questions. We will take a practice exam as a group.

## Small Systems Class 2 Exam Preparation Course

Tuesday, October 29 9:00 am - 2:00 pm  
Location: Vermont Rural Water Office  
20 Susie Wilson Rd, Essex Junction, VT

**W** 4 TCH

Member Cost: \$32 Non-member cost: \$40  
Instructor: Tim Russo, VRWA

This course is designed as a short review for the Class 2 water operator certification exam. We will review test-taking skills, math questions, exam questions, and general water system operator questions. We will take a practice exam as a group.

## Basic Excel Course

Two sessions offered:

- Thursday, November 7 9:00 am - 12:30 pm  
Location: Vermont Rural Water Office  
20 Susie Wilson Rd, Essex Junction, VT
- Wednesday, December 4 9:00 am — 12:30 pm  
Location: City of St. Albans Fire Department  
30 Lower Welden St, St. Albans, VT

**W WW** 3 TCH

Member Cost: \$24 Non-member cost: \$30  
Instructor: Matt Guerino, VRWA

This training will cover computer operation fundamentals and the basics of Excel, for use by water and wastewater treatment plant operators and other system personnel. Participants will learn the basics of Excel spreadsheets. This course is recommended for those with some working experience with computers. Each attendee will use a laptop computer provided by VRWA.

*Registration limit of 10 participants per session.*



Register online at [www.vtruralwater.org](http://www.vtruralwater.org)

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9 Wastewater Microbiology Down-Well Camera	10 Wastewater Sampling	11	12
13	14	15	16 Class 2 Operator Certification	17	18 Class 2 Operator Certification	19
20	21	22 TNC Coliform Sampling	23 Class 2 Operator Certification Phosphorus TMDL	24 Class 2 Operator Certification Water Chemistry	25	26
27	28	29 Small Systems Exam Prep 3/4/D Exam Prep	30	31		

## November

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7 Basic Excel Keep Your System Sustainable	8	9
10	11	12	13 VOSHA Safety	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

## December

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

# Course Information

## Registration

- **Register online:** [www.vtruralwater.org](http://www.vtruralwater.org)
- **Register by mail:** Complete the form on page 5 and send it with a check or money order to:

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

- **Register by fax:** You may complete the form on page 5 and fax it to 866-378-7213

Seating is limited, so register early. Payment ensures your spot. Registration deadline is two business days before the course start date. Late registrations and walk-ins are subject to a \$20 late fee.

## Fees

Mail your check or money order to the address above before the course begins. We can accept checks or exact cash on the day of the course. We cannot accept credit cards at this time.

You will receive an invoice at the end of the month for any unpaid course fees. Invoices that are not paid within 60 days may prevent you from registering for future courses.

Grant support allows us to keep the registration fees low. However, we are unable to offer scholarships.

VRWA members receive 20 percent off all training fees.

## Day-of-Class

Sign-in begins 15 minutes prior to the course start time. Come early for coffee and snacks! Please bring a lunch to any course scheduled past 1 pm.

## Credit

All courses in this catalogue are eligible for Training Contact Hours (TCH), which are applicable to operator certification in Vermont. You must attend the full course in order to receive credit. The course description is labeled with icons that indicate whether credits are applicable to water operator certifications, wastewater operator certifications, or both.

All attendees will receive a certificate of TCHs earned after completing a course. Reprints of lost TCH certificates are available for a fee.

## Cancellations / Refunds

If you are unable to attend a class, you must contact our office at least 24 hours in advance in order to receive a refund. No-shows will be charged the full course fee.

If a course is cancelled due to low enrollment or inclement weather, you will be contacted by a staff member and refunded the full course fee.

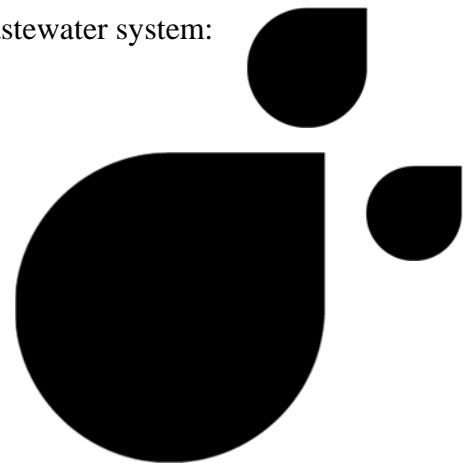
## Special Needs

Please contact us at 802-660-4988 prior to your class to request accommodations.

## Become a Vermont Rural Water Member!

VRWA membership provides many benefits to your water or wastewater system:

- 20 percent discount on all training registration fees
- Preferred scheduling for onsite visits
- Subscription to NewsLeaks quarterly newsletter
- Training calendar mailed quarterly
- Phone consultations
- Source protection planning
- 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



More information and membership registration at [www.vtruralwater.org](http://www.vtruralwater.org)

# Course Catalogue

## Keep Your Water and Wastewater Systems Sustainable

Thursday, November 7 8:00 am - 12:30 pm

Location: Rutland WWTF

110 Green Hill Ln, Rutland, VT

**W** **WW** 4 TCH

Member Cost: \$32 Non-member cost: \$40

Instructor: Joe Duncan P.E., Champlain Water District

Proctor: Wayne Graham, VRWA

Learn how to protect your water and wastewater assets by creating budgets, setting effective rates, planning for capital replacements, and understanding the allocation process. This class will help you ensure the sustainability of your municipal water and wastewater infrastructure.

## VOSHA Safety Training

Wednesday, November 13 8:00 am - 3:00 pm

Location: Montpelier Public Works Garage

783 Dog River Rd, Montpelier, VT

*Parking across the street at the Recreation Field*

**W** **WW** 6 TCH

Member Cost: \$48 Non-member cost: \$60

Instructor: Dan Whipple, VOSHA

Proctor: Elizabeth Walker, VRWA

Keep yourself and coworkers safe by gaining an understanding of safety standards for hazard communication, personal protective equipment, trenching, confined space and lock-out/tag-out.

## Surface Water Treatment Course (Package Plants)

Tuesday, December 10 8:00 am - 4:00 pm

Location: Knight Point Maintenance Shop

31 Knight Point Rd, North Hero, VT

**W** 7 TCH

Member Cost: \$56 Non-member cost: \$70

Instructors: Rich Ross and Dave Lucy, WesTech; Michael Sullivan, David F. Sullivan and Associates

Proctor: Matt Guerino, VRWA

*Lunch will be provided.*

This training will tour a package plant and cover a brief history and anatomy of surface water treatment, including:

- Treatment optimization, upgrades, and expansions
- Maintenance
- Clarifier and backwash
- Performance of package plants



*Diana Butler, VRWA, tours Ludlow's wastewater treatment plant.*

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## 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**



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Essex Jct., VT 05452-2827  
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## IMPORTANT WATER & WASTEWATER OPERATOR TRAINING ANNOUNCEMENT ENCLOSED

Do not discard until December 31, 2019

### **14 Water & Wastewater Training Courses Inside!**

- Down-Well Cameras
- Wastewater Microbiology
- Surface Water Treatment
- Water Chemistry
- Phosphorus TMDL
- Coliform Sampling
- Wastewater Sampling
- System Sustainability
- Water Operator Certification
- Exam Prep
- Excel
- VOSHA Safety

**View the most current training  
schedule and register for  
courses online at:**

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