

About VRWA

VRWA is a nonprofit association that provides training and onsite technical assistance to water and wastewater systems in Vermont. Contact us today for assistance.

Pre-registration is required for all training courses. To reserve a seat, submit payment (for training materials and refreshments) and completed registration form to the below address. If no payment is due, the registration form may be faxed.

Vermont Rural Water Association
187 St. Paul Street
Burlington, VT 05401-4689
802-660-4988
802-660-4990 fax
vrwa@vtruralwater.org
www.vtruralwater.org

To check our most recent training schedule, register online, or contact our trainers, visit VRWA's website:
<www.vtruralwater.org>.



Water Works Math Location:

Attendees will be contacted with exact location and directions prior to the course.

Vermont Long Course Location:

Unless otherwise noted, all classes will be held at the Mad Tom Notch Room at Cyprian Learning Center in the Osgood Building, State Office Complex, Waterbury. Any location changes will be announced at the first session of the course. Exact schedules may vary slightly.

Directions to Cyprian Learning Center:

Take Exit 10 off I-89 and travel south on Route 100. At the stop sign, take a left onto North Main Street (Route 2 south). At second set of lights, take a right onto Park Row. At the stop sign, continue straight onto the Outer Loop. The Osgood Building is the first on the left as you are coming into the complex. The parking lot is on the right directly across from the Osgood Building. The Cyprian Learning Center is on the ground floor.

**These programs are supported
with funding from**

**VERMONT WATER SUPPLY DIVISION
U.S. EPA**



Vermont Long Course for Drinking Water System Operators

January - March 2006

and

Water Works Math

March 2006

Vermont Long Course

When & Where: Tuesdays, 8:00am-12pm, Jan. 10 - Mar. 28, 2006, Waterbury (see reverse for directions)
Cost: ~~\$4050~~ \$350*
Credit: 3.5 Training Credit Hours will be issued per session; 42 TCH will be issued to those who complete 100% of the course.

This training program is designed for new and existing Class 3, 4, and D water operators. The program will prepare individuals to take the Vermont State Class 3, 4, and D water operator certification exams. All aspects of water operations are covered during this multi-week course. Attendees are expected to attend all the given sessions. It is recommended that you purchase the following texts:

- AWWA Basic Science Concepts and Applications
- AWWA Water Treatment
- AWWA Water Transmission and Distribution
- AWWA Operator Certification Study Guide
- VRWA Small Systems Manual

Session 1 January 10 - Safe Drinking Water Act: contaminant groups, health risks, waterborne diseases, monitoring schedules, sampling, Water Supply Rule, Total Coliform Rule, operator certification.

Session 2 January 17 - Water sources, hydrologic cycle, water quantity & quality, water conservation, source protection.

Session 3 January 24 - Water chemistry, corrosion control, microbiology and waterborne diseases, disinfection, monitoring, CT values, LT1/LT2 ESWTR and D/DBP Rules.

Session 4 January 31 - Treatment process, corrosion control, iron and manganese treatment, softening, ion exchange.

Session 5 February 7 - Fluoridation, adsorption (activated carbon), aeration, membrane processes, disinfection.

Session 6 February 14 - Instrumentation & process controls, pumps and pumping.

Session 7 February 21 - Storage systems, meters, cross connections.

Session 8 February 28 - Surface water treatment processes: conventional, direct, slow sand, membrane filtration.

Session 9 March 7 - Process control and plant O&M at the City of Montpelier facility.

Session 10 March 14 - Distribution system basics, water main design and hydraulics, piping systems, appurtenances, operator safety.

Session 11 March 21 - Pipe installation, trench work, valves/hydrant installation, operation and maintenance, operator safety.

Session 12 March 28 - Information management, operation and maintenance manuals, system maps, tie distances, public relations work, final practice exam.

Water Works Math

When & Where: Thursdays, 8:00am-12pm, March 16-30, 2006, Waterbury (**Exact location TBA**)
Cost: ~~\$300~~ \$100*
Credit: 12 TCH will be awarded to those who complete 100% of the course.

This course's goal is for participants to have an effective strategy for setting up and solving math word problems.

Session 1 March 16 - Fractions, decimals, percents, equations.

Session 2 March 23 - Unit conversions, word problems: area, volume, flow, pressure, velocity.

Session 3 March 30 - Word problems: hydraulics, dosages, treatment.

Vermont Water Operator Training Sign-up Form

Sign up for:	Materials Fee*:
<input type="checkbox"/> Vermont Long Course, all sessions	\$350 _____
<input type="checkbox"/> Water Works Math	\$100 _____
<input type="checkbox"/> Check here if your system is a Vermont community or non-transient non-community which serves a population of 3,300 or less.	\$0 (Above fees waived)*
	Sub-total: _____
<i>VRWA Members may subtract a 20% discount off Subtotal:</i>	- _____

Recommended texts (at cost):	
AWWA Basic Science Concepts & App.	\$68 _____
AWWA Water Treatment	\$78 _____
AWWA Water Transmission and Dist.	\$78 _____
AWWA Oper. Certification Study Guide	\$45 _____
VRWA Small Systems Manual	\$30 _____

Total enclosed: _____

Name(s)

System/Organization

WSID#

Address

City, State, Zip

Phone

Email

*Due to government support secured by VRWA, your cost is reduced to course materials only; actual training is free of charge. VRWA member systems receive a 20% discount. Fees are waived for water operators of Vermont Community and NTNC systems serving a population of 3,300 or less. You must include the WSID# on the registration form.

Registration:
Complete form and send to VRWA with check for full amount (see reverse for address). **Registration form must be received one week prior to course start date.** Seating is limited, so register early. Late registrants will be charged an additional \$20. No walk-ins, please.