

Each issue, we ask members of the *On Tap* Editorial Advisory Board to answer a drinking water-related question. We then print as many responses as space permits. The opinions expressed are not necessarily those of NESCA.



**Lisa Raysby Hardcastle, P.E.**

Contractor, VERSAR, Inc  
Fort Lewis Public Works

#### Editorial Advisory Board

**Jerry Biberstine**

Senior Environmental Engineer  
National Rural Water Association

**Jenny Bielanski**

Drinking Water Utilities Team Leader  
EPA Office of Ground Water and  
Drinking Water

**Rodney Coker**

Tribal Utility Consultant (Retired)  
Indian Health Service

**Mark Coyne**

Associate Professor  
University of Kentucky

**Frank DeOrio**

Director of Municipal Utilities  
Auburn, NY

**Kevin Kundert**

President and Chief Instructional  
Systems Mechanic  
eTRAIN ONLINE, Inc.

**Z. Michael Lahlou, Ph.D.**

Civil and Environmental Engineer  
Huntington Beach, CA

**Lori B. Libby**

Senior Project Manager  
Center for Public Management  
and Regional Affairs  
Miami University of Ohio

**Babu Madabhushi, Ph.D.**

Project Engineer  
URS Corporation  
Miami Springs, FL

**Dale Ralston**

President  
Ralston Hydrologic Services  
Moscow, ID

**Lisa Raysby Hardcastle, P.E.**

Contractor, VERSAR, Inc  
Fort Lewis Public Works  
Fort Lewis, Washington

**Jay Rutherford, P.E.**

Water Supply Division Director  
Vermont Department of  
Environmental Conservation

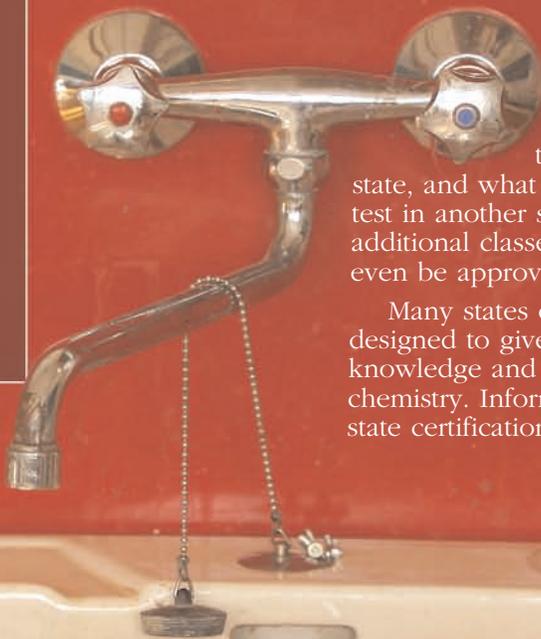
## Q: *If you knew someone who was preparing to take his or her first operator certification exam, what advice would you offer?*

### Study, Study, Study

Each state certification office has a list of references that they suggest be studied for each exam and will usually provide a list of sample questions so that the student can get a feel for what the test will be like. The applicant should know what discipline he will be seeking certification in: water or wastewater, collection or distribution, industrial, and possibly even what size system he wants to work in. It is important to contact the state in which you are going to take the test. Each state has its own criteria, its own test questions, and its own area of expertise for a given level of test.

It is also important for the applicant to have a good summary of his work experience and training pertaining to the type of certification that he wishes to take. Application requirements differ from state to state, and what will work in one state may not be adequate to take a test in another state. This means that the applicant may have to take additional classes, or get a given amount of experience before he can even be approved to take a test.

Many states offer certification preparation classes. These are not designed to give answers to tests, but to go over the various areas of knowledge and provide special practice in such areas as math and chemistry. Information on these courses can usually be found from the state certification office or often from the state rural water association.



**Jerry Biberstine**  
Senior Environmental  
Engineer  
National Rural Water  
Association

## Be Prepared

When I hear that someone is going to take a certification exam, I'm torn between offering sympathy or advice. Having taken many, many tests (the most recent being a professional engineering exam) and having done regulatory and math training for operators studying to take certification exams, I believe I am qualified to extend condolences as well as offer suggestions.

First, be prepared. Learn the subject matter thoroughly and organize what materials you will need for the test. Some specific techniques are:

- Use a checklist, summary sheet, or flash cards to review the material;
- Take practice tests;
- Avoid cramming prior to the exam;
- Get a good night's sleep the night before;
- Strive for a relaxed state of concentration; and
- Remember to breathe.

To be better prepared, operators need to know which learning style or combinations of styles (reading, listening, writing, observation or doing) works best for them. The more learning styles you can combine, the better. For instance, an operator taking an exam for Backflow Assembly Tester should have a higher success rate of passing exams by reading the material, listening to an instructor or someone else knowledgeable on the subject, taking notes, observing the procedure, and performing the procedure.

For math problems, the best way to figure out which equation to use and how to solve the problem is to determine what unit of measure you are solving for and list the data you have to work with in units of measure. Double check your answers. When all else fails and you face multiple-choice answers, eliminate the obviously wrong answer(s) and reverse calculate if you can.

Comprehensive operator study materials are available from California State University Sacramento Office of Water Programs ([www.owp.csus.edu](http://www.owp.csus.edu)) and the American Water Works Association ([www.awwa.org](http://www.awwa.org)). For additional training, visit the U.S. Environmental Protection Agency's Drinking Water Academy ([www.epa.gov/safewater/dwa.html](http://www.epa.gov/safewater/dwa.html)). The Association of Boards of Certification has a Web-based, very small, water system operator certification practice exam, however they charges \$20 ([www.abccert.org](http://www.abccert.org)). Practice operator exams are available from the Evergreen Rural Water of Washington ([www.erwow.org/practicetest.htm](http://www.erwow.org/practicetest.htm)).

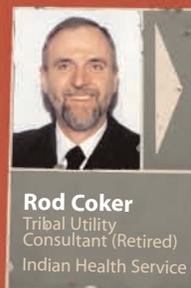
Finally, remember that the person who seeks out answers to questions they do not know and knows where to go for the answers will be diligent and successful.

## Check With the State

To prepare for your first operator certification exam, start by contacting the operator certification officer in your state. They can be very helpful as they have answered this question for others before you and know what resources are freely available to you. Many states have created state-specific study guides and training tools that help you channel your studies in the right direction.

Next, look at the big picture. How many questions are on the exam and in what topic areas are they? Are some areas of the test weighted more heavily than others? If so, then focus your studies proportionately.

Study early, study frequently, and avoid last-minute cramming. You'll have a lot less stress and retain information much better if you do your studies over a longer period of time and have some time to digest and apply the information you are learning. Depending on your previous experience in water operations, the period of time needed for study can range from a week or two to several months. There is a lot to know and it will take some time to put all the pieces together if you expect to perform well on the exam (and be a good operator).



## An Essential Profession

My colleagues have offered great suggestions about taking tests and the resources available to help you in this endeavor. I don't think I can expand on their advice. Instead, I offer my congratulations.

You have decided to join ranks with some of the very best people in any profession and will be providing a product that is essential to life itself. When you get right down to it, drinking water is the only thing in our environment that we produce that we absolutely have to have and for which there is no substitute. There are no other goods and services, products or commodities that we couldn't do without for a while. Without water, though, we would perish in a matter of days.

Don't forget that taking a certification exam will not make you a better operator. That's right, passing a test—in and of itself—will not make you a better water system operator. What it does is demonstrate that you have achieved a certain level of knowledge. It is how you use that knowledge and how you apply the things you have learned to pass that exam that will make you a better operator. Good luck and best wishes.