

Ask the Experts



Running a water system correctly can be a complicated endeavor. If a new operator or board member came to you seeking advice, what are some resources you'd suggest to make the job a little easier?

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 the NDWC.

Editor's Note:

The National Environmental Training Center for Small Communities—a National Drinking Water Clearinghouse partner within the National Environmental Services Center—has materials devoted to water and wastewater issues. Their curriculum “Managing a Small Drinking Water System: A Short Course for Local Officials,” for example, covers managerial, technical, and financial issues from a local official’s perspective. For more information, contact NETCSC at (800) 624-8301 ext. 5538 or visit their Web site at www.netc.wvu.edu.

New Curriculum Planned

I am currently involved in developing an innovative curriculum for local officials in Ohio. This effort is a result of Ohio’s Small Communities Environmental Infrastructure Group.

The first session, “Putting Together the Pieces of a Community Water System,” introduces a 37-piece puzzle with corresponding articles that serve as a guide through a small community water system. The second session involves a field trip that uses a workbook titled *Exploring the Needs of Your Community Water System*. The last session incorporates a board game simulation that illustrates the need to identify and pursue managerial, technical, and financial resources for funding water system projects.

To learn more about this project, visit www.ag.ohiostate.edu/~setll/programs/water_about.html or contact Dr. Karen Mancl at (614) 292-6007.

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Summaries Are a Good Start

Initially, I would recommend “summary type” references. These would be things that provide an overview or a general coverage of a topic. Then, as the individual gets more involved, he/she can seek more detailed or in-depth references to address specific topics. The U.S. Environmental Protection Agency has produced a ton of “quick reference guides” on all types of drinking water issues and regulations. These can be accessed at www.epa.gov/safewater. Most state drinking water programs have also developed their own versions of these.

The National Drinking Water Clearinghouse (NDWC) *Tech Briefs* also fit into this category of quick and handy references. [To order a collection of these *Tech Briefs*, call the NDWC at (800) 624-8301 and request item #DWPKE71.] The American Water Works Association (AWWA) has a great study guide for operator certification and their *Water Distribution Operator Training Handbook* is a must for a new distribution system operator.

There are lots of quick and easy references for things like sizing chemical feed pumps and determining feed rates, etc. Most operators that have been around for a while will have this type of information and would gladly share with a new operator. The *USA Bluebook* is a great resource for this information, as well as being an extensive source for equipment. Also, I have a simple math conversion program on my computer. With a click of a button, I have access to more than 20 categories of items. It really comes in handy and is a whole lot quicker than using my fingers and toes.

The issue with definitive-type references is that there’s always a newer and better version coming out. Our industry is changing at a faster rate all the time, so someone is always coming out with a text that has the newest designs and ideas. However, if you really want detail, you can’t go wrong with Susumu Kawamura’s *Integrated Design and Operation of Water Treatment Facilities* (New York: John Wiley and Sons) as a place to start.

Rodney L. Coker
Tribal Utility Consultant
(Retired)
Indian Health Service



Training Is Key

The first suggestion I would make would be to explore the various associations dedicated to helping those people involved with treating water, such as our own NDWC. Another very good organization is the American Water Works Association (AWWA). Along with an extensive bookstore and archive library, they also host the Small Utility Network. This Web site www.awwa.org/science/sun/ has a links listing that contains more than 35 pertinent resource organizations dedicated to water professionals.

The AWWA provides an “Online Institute” for further education and training of certified operators. You can access information concerning the programs that they offer at www.awwa.org/learnonline/. Most of their classes are certified for continuing education units (CEUs)—operators are required to obtain these in to keep their licenses current—but you do not need to be an operator or trying to acquire certification to enroll.

Finally, I would recommend checking into the many operator training manuals offered through the California State University (CSU)—Sacramento, School of Engineering. The list includes:

- Small Water System Operation and Maintenance
- Water Distribution System Operation and Maintenance
- Water Treatment Plant Operation—Volumes I and II
- Utility Management
- Small Wastewater System
- Operation and Maintenance—Volumes I and II
- Operation of Wastewater Treatment Plants—Volumes I and II
- Operation and Maintenance of Wastewater Collection Systems—Volumes I and II
- Advanced Waste Treatment
- Industrial Waste Treatment—Volumes I and II
- Treatment of Metal Waste Streams
- Pretreatment Facility Inspection

All of these training manuals may be purchased through CSU, or they may be taken as a certified course with correspondence tests to be awarded CEUs for certification purposes. Call CSU at (916) 278-6142 or e-mail them at wateroffice@csus.edu for further information. These are all excellent manuals and programs that are widely recognized throughout the industry.

Remember, though, there is still no better source for information at any treatment plant than talking directly to the folks who run it.



Nelson Yarlott
Resident Operator
Greeley, Colorado

Access to Funds Needed

I don’t want to toot my own horn, but I have to admit I usually steer new people to our training site or the NDWC site. For hands-on help, I refer them to the Rural Community Assistance Program (RCAP), a great team of qualified technical assistants. Many small systems are unaware of the numerous resources available to them, most of which are free.

The tools we produce here at the Montana Water Center are very user-friendly and popular. We’ve distributed more than 30,000 in the last three years and have downloads of programs and pdf documents to the tune of about 1,500 per month. [To order the CD training programs

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Drop Us a Line

Do you have a suggestion for improving this magazine or a great idea for an article we should explore? Do you have a question for our “Ask the Experts” column or a Web site that you find particularly helpful? Drop us a line!

Mark Kemp-Rye—e-mail: mkemp@wvu.edu or phone: (800) 624-8301 ext. 5523
Kathy Jespersen—e-mail: kjaspers@wvu.edu or phone: (800) 624-8301 ext. 5533

Or write to us at:
 National Drinking Water Clearinghouse
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We’re always interested in learning how we can make *On Tap* more useful to you.

Operator Basics or *Sanitary Survey Course Prep*, call the NDWC at (800) 624-8301 and request items #DWCDTR18 or #DWCDTR19, respectively.] The technical assistance provided free-of-charge by the NDWC with access to experts via a phone call and by RCAP technical assistants in person is hard to beat.

There are many other good sources out there, but many organizations charge for their materials or time—a big hurdle for small systems folks. The new reimbursement money provided to state certification agencies is way underutilized because the audience does not know about it, or they consider it a hassle to deal with. In my opinion, training and technical assistance providers need to spend a lot more time and energy on making existing resources more apparent to small system operators and managers.

Kevin Kundert
Training Director
Montana Water Center



A Wealth of Material Out There

If a new operator or board member came to me seeking advice, these are some of the resources that I would suggest:

Manuals

Manuals are essential to properly running a water system for operators, managers, and board members. For system operations, the most complete, as well as the most commonly used, are the *Sacramento Manuals* that Nelson Yarlott mentions. These are a group of manuals that are separated into types of operations for treatment and distribution. They have proven to be excellent references for both system operation and operator training and study for certification purposes.

The Water Board Bible: The Handbook of Modern Water Utility Management, developed jointly by the Kansas Rural Water Association (KRWA) and Ellen Miller Associates, is an excellent manual for advice on resolving board issues, keeping a system in a healthy condition, and for training new board members. [To order a copy of *The Water Board Bible*, call the KRWA at (785) 336-3760 or visit their Web site at www.krwa.net and click on "General Store."]

Onsite Assistance

When larger problems arise, onsite technical assistance can be very helpful. State rural water associations have federally funded circuit riders who can provide free onsite assistance to systems. These circuit riders have a wide range of knowledge about small systems and can be very effective at helping resolve problems, as well as instructing operators about proper operations and management, treatment, sampling, and many other issues. Visit the National Rural Water Association Web site (www.nrwa.org) or call (580) 252-0629 to find the circuit rider in your area.

Training Courses

Training courses for operators and specially designed board member training can be very effective in preparing both operators and board members to address the many issues involved in running a water system. Many courses are designed to address particular problems; others are aimed at operator certification; others provide a broad range of topics to keep system personnel up to speed with changes in technology and regulations. While there are many training courses and trainers, each state primacy agency or operator certification program can provide information on available training going on in the area.

Compliance Issues

State primacy agencies can be very helpful in dealing with potential compliance issues. They can provide sampling schedules and system requirements including monitoring schedules, treatment requirements, standards to be met, and reporting /recordkeeping needs. They can usually provide information on system history, past violations, sanitary survey results, and any other questions. (For primacy agency contact information in your state, call the NDWC at (800) 624-8301.)

Publications

In keeping operators and board members up to date on issues, innovative solutions to problems, and changing regulatory requirements, newsletters, and magazines can be extremely helpful. Examples include: *On Tap* by the NDWC, AWWA's *Opflow*, and various state rural water association publications.

Jerry Biberstine
Principal Engineer
National Rural Water
Association

