



The Environmental Training Newsletter for Small Communities

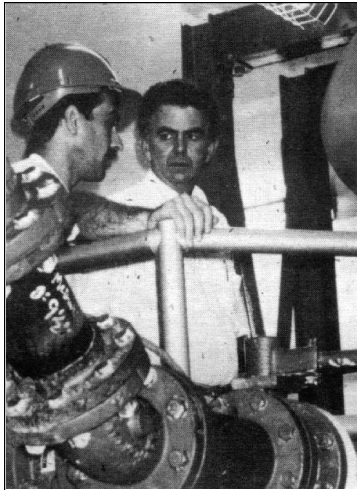
New certification guidelines affect states, water systems, and training

by Laurie Klappauf
NETCSC Contributing Writer

Over the next several years, drinking water systems nationwide will need to have certified operators who meet new state requirements. The new requirements will result from certification guidelines issued by the U.S. Environmental Protection Agency (EPA) on February 5, 1999. These federal guidelines, *Final Guidelines for the Certification and Recertification of the Operators of Community and Nontransient Noncommunity Public Water Systems*, will affect state certification programs, water systems, and those who provide training or technical assistance to drinking water operators.

"The biggest impact will likely be in the area of small systems," says Rick Naylor, project team leader with EPA. "While all states already have operator certification programs, many states currently exempt small systems from the requirement to have a certified operator. Under the guidelines, these states will be required to extend the operator certification requirements to small systems and, as a result, small system operators will be required to take training to help them gain the skills and knowledge required to perform their jobs. Congress recognized this and also passed a provision establishing a program to reimburse small system operators for training and certification costs."

The guidelines specify minimum federal standards for certifying operators of community and nontransient noncommunity public water systems (in this article, referred to as public water systems), but they leave many implementation decisions up to states. (See sidebar on page 8.) The guidelines were required by the Safe Drinking Water Act (SDWA) Amendments of 1996 to improve the quality and reliability of the nation's public drinking water supplies.



New drinking water certification guidelines issued by the U.S. EPA will affect state certification programs, water systems, and those who provide training or technical assistance to operators.

"The guidelines will ensure consistent high-quality operator certification," says Naylor. "These are minimum standards, but they will ensure that *all* states at least meet these guidelines; some states already have requirements that exceed them in some areas."

States that do not meet the guidelines by February 5, 2001, risk losing 20 percent of their Drinking Water State Revolving Fund (DWSRF) allocations.

Trainers and technical assistance providers need to be aware of the guidelines because they will

influence the training needs of drinking water operators. Training needs will change because state certification requirements will change, and this will affect small water system operators.

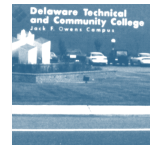
State programs may need changes

"The first wave of impact will be on the certification programs themselves," says Martin Nutt, training and certification officer for the Arkansas Water Operator Licensing Program.

According to the Association of the Boards of Certification (ABC), all states already have some type of drinking water operator certification program in place. However, specific provisions—such as exactly who must be certified and according to what standards—vary from state to state. The new standards define basic minimum requirements that states must meet to avoid DWSRF withholding.

For example, the new guidelines require that all public water systems have a certified operator and that these operators must take

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NETA conference slated for April in Nashville

The National Environmental Training Association's (NETA) 21st Annual Conference and Workshops is scheduled for April 24 to 28 in Nashville, Tennessee. The event is billed as the environmental safety and health training professional's premier annual education and networking event.

Preconference workshops will be held April 24 and 25 on topics such as "Delivering Effective Environmental Training," "Designing and Implementing Environmental Management Systems," "Effective Use of Computer-Based Resources," and "Return on Investment: The Fleecing of Your Training Budget."

The conference program includes general sessions, technical sessions, instructional technology sessions, roundtable discussions, an awards luncheon, a NETA business meeting, networking opportunities, and a social outing. The certified environmental trainer exam also will be administered during the conference.

For more information or to register, write to NETA, 3020 E. Camelback Road, Suite 399, Phoenix, Arizona 85016-4421, call (602) 956-6099, or fax (602) 956-6399.



NEHA plans annual conference, exhibition

The National Environmental Health Association's 63rd Annual Educational Conference and Exhibition is set for July 6 to 9 in Nashville, Tennessee.

This premier event for environmental professionals includes sessions on drinking water quality and onsite wastewater treatment. Keynote speaker is attorney Jan Schlichtmann, who fought industrial polluters in Massachusetts and is the subject of the current hit movie, *A Civil Action*. Vice President Al Gore also has been invited to give a keynote presentation.

Sanjay Saxena, program coordinator for the National Drinking Water Clearinghouse, will present "Technical Assistance Resources" during the drinking water session.

The National Onsite Demonstration Project (NODP) Phase IV is sponsoring an afternoon session on July 8 concerning onsite wastewater management districts. The session will feature a roundtable discussion, management district models, the role of sanitarians, developing management programs, getting started, and a watershed perspective.

NODP IV is funded by the U.S. Environmental Protection Agency and coordinated by the National Small Flows Clearinghouse.

For more information about the conference, phone (303) 756-9090 or visit NEHA's Web site at www.neha.org.

Utah plans regional onsite symposium

The Utah On-Site Wastewater Treatment Training Center is planning an "Intermountain States On-Site Wastewater Treatment Symposium" at Utah State University in Logan in July.

The symposium will bring together people from Utah, Nevada, Arizona, New Mexico, Colorado, Wyoming, Montana, and Idaho to address onsite wastewater treatment issues in these states. The symposium will focus on:

- identifying resources and needs for onsite education, research, regulatory goals, and technology transfer;
- establishing a database of regulations, criteria, use, and performance of onsite treatment technologies in the region; and
- establishing a communication network among interested parties and developing opportunities for sharing information within these states.

The symposium will use roundtable discussion panels with facilitative moderators to summarize onsite needs, issues, and proposals.

For more information about the symposium, call Steve Iverson, manager of the Utah On-Site Wastewater Treatment Training Center, at (435) 797-3159 or send e-mail to him at siverson@cc.usu.edu. Information is also available at the following Web site: www.engineering.usu.edu/uwrl/training.



Train-the-trainer workshops set for EPA Region VII

The National Environmental Training Center for Small Communities (NETCSC) is working with St. Louis University to offer "Assessing Wastewater Options for Small Communities," a train-the-trainer program, at four different locations in U.S. Environmental Protection Agency Region VII in the spring.

"The course is designed to help community outreach professionals work more effectively with small community officials on wastewater issues. Participants in the course can use the material covered to help local officials and others understand the process of developing or improving the wastewater treatment systems in their communities," says John Hoornbeek, NETCSC training research associate.

"Assessing Wastewater Options for Small Communities" is designed for environmental trainers and technical assistance providers who work with community decision makers, including mayors, city or town council members, county officials, and planners. The course is focused on assisting those individuals who provide training and technical assistance on wastewater issues to local officials in small communities.

By the end of the course, participants should be able to provide instruction to small community decision makers on how to:

- explain what wastewater is and why it should be treated,
- communicate the community's wastewater treatment responsibilities,
- assess their wastewater needs,
- select and work with a consulting engineer,
- identify wastewater treatment options to meet their community's needs,
- identify appropriate financing options, and

- promote the long-term viability of the selected wastewater option.

"Assessing Wastewater Options for Small Communities" is scheduled for the following dates and locations:

- Jefferson City, Missouri: April 6-7, Runge Conservation Nature Center
- Cedar Rapids, Iowa: April 19-20, Kirkwood Community College
- Emporia, Kansas: May 10-11, Best Western
- Hastings, Nebraska: May 12-13, Hastings Community College

Registration fee for the course is \$95.

For more information about the program or to register, write to Sandy Miller, NETCSC, West Virginia University, P.O. Box 6064, Morgantown, WV 26506-6064, call (800) 624-8301 or (304) 293-4191, extension 5536, or send e-mail to smiller@wvu.edu.

NETCSC wastewater course to be offered at National Operator Training Conference

The National Environmental Training Center for Small Communities (NETCSC) will offer the course, "Troubleshooting and Optimizing Wastewater Treatment Systems in Small Communities," as a preconference workshop at the 1999 National 104(g) Operator Training Conference on June 5 and 6 in Providence, Rhode Island.

More details on this training session will be included in the next issue of *E-train*.

For more information about the program, write to Sandy Miller, NETCSC, West Virginia University, P.O. Box 6064, Morgantown, WV 26506-6064, call (800) 624-8301 or (304) 293-4191, extension 5536, or send e-mail to smiller@wvu.edu.

Annual Operator Training Conference scheduled for RI

"Building Bridges to Tomorrow" is the theme of the 1999 National 104(g) Operator Training Conference scheduled for June 6 to 9 in historic downtown Providence, Rhode Island.

The 16th annual conference is sponsored by the New England Interstate Water Pollution Control Commission and the Rhode Island Department of Environmental Management.

Wastewater professionals from across the country will be teaching workshops and giving presentations on the following topics:

- process control,
- pollution prevention,
- nutrient removal,
- improving lab performance,

- microscopic examination,
- computer maintenance,
- the future of 104(g),
- increasing long-term compliance using 104(g),
- youth and the environment, and
- success stories and lessons learned, among others.

A preliminary agenda and registration information for the conference will be mailed in early March.

For more information about the conference, call Charles Conway at (978) 323-7929 or send e-mail to him at cconway@neiwppc.org.

Delaware training center starts late, makes its way to the top

by Jill A. Ross
Acting E-train Editor

The Environmental Training Institute at Delaware Technical and Community College in Georgetown, Delaware, was a latecomer among environmental training centers, but it has matured quickly into one of the most comprehensive and progressive training centers in the country.

"We were one of the last states to start an environmental training center," said Jerry Williams, program manager and instructor for the center. "Because of this, we've taken a lot of what different states do and consolidated into one environmental training center.

"By the time we got started, everyone wanted us to have a center, so we got support from every corner of the state," said Williams. "We've had unbelievable support from the state legislature, the college leadership, state regulatory agencies, and professional associations. All of these resources got funneled down to train the operators—it was synergistic in effect."

Getting started

Since 1983, Delaware Tech had offered a wastewater operator certification program only. In the early 1990s, Rick Duncan, director of the Delaware Rural Water Association (DRWA), approached Williams about the state's need for a water operator program. With his help, Williams put together an advisory committee of local, state, and federal environmental officials to work on the project.

Jim Kern, operator outreach coordinator for U.S. Environmental Agency (EPA) Region 3 and a member of the advisory committee, pointed out the availability of funds under section 109(b) of the Clean Water Act that is available for states to use to construct environmental training centers. "We learned that we were one of only two states that had not used its funding under 109(b)," said Williams.

In 1993 the college received \$497,000 from EPA Region 3 through Delaware's Department of Natural Resources Water Quality Division. This money was used to

remodel and convert the college's Industrial Training and Education Building to the Environmental Training Institute. The building, which was completed in 1996, includes administrative offices and three modern classrooms, one of which is a pump/mechanical equipment lab that contains a variable motor control center.

"This hands-on room for the training of pumps is the only one in the country," said Williams. "The pump lab was designed by Kevin Burdette, a water certification instructor, and it allows us to pump water right into the classroom and includes a sample distribution and collection system in the floor. This classroom is instrumental for students learning how flow and pressure relate to various pumps and electrical usage.

"We'd always had the classroom behind the stage. Now we have the best training facility in the college," said Williams. "This helps to elevate the status of operators."

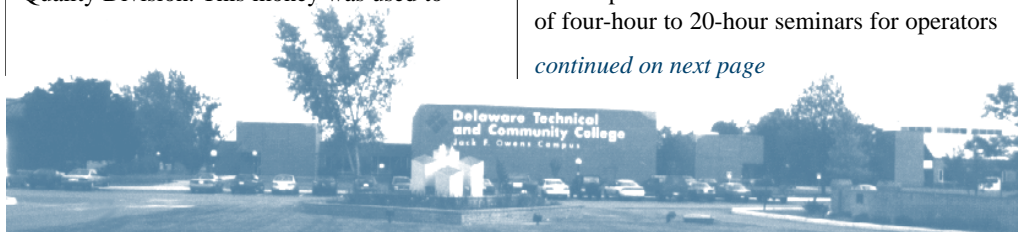
Williams is appreciative of the support he received from Delaware Tech administrators in getting the Environmental Training Institute established at the college. "From Dr. Orlando George, college president, to Dr. Tim Kavel, campus director, to my boss, Patricia Carmine, director of corporate and community programs, everyone at Delaware Tech really supported our efforts."

Developing curriculum

While the actual training center was being constructed, Williams and others were hard at work developing the water operator course with DRWA. "The state and DRWA worked together to the benefit of the operators," said Williams. "In addition, other established training centers were instrumental in helping us out so that we did not have to reinvent the wheel."

Williams and representatives from the college visited the Maryland Environmental Training Center run by Jake Bair. "Jake opened his doors for us, answered our questions, showed us how his center worked. He even let us use his instructors to help develop our course." The center then began offering its own water operator certification course and a series of four-hour to 20-hour seminars for operators

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to earn CEUs (continuing education units) to maintain and renew their licenses.

Currently the center has 30 to 40 water operators and 50 to 80 wastewater operators taking certification courses each year. In addition, between 500 and 600 operators attend classes to obtain their license renewal hours. Williams has a staff of 20 to 30 part-time instructors who teach at the center, most of whom are senior operators and engineers. He credits leaders of state regulatory agencies and professional associations for their assistance in providing resources and instructors for the center.

Now that Delaware Tech was offering noncredit water and wastewater operator certification courses to prepare current operators to successfully complete the state's rigorous licensing examination, it was time to consider offering a credit program to educate students entering the environmental professional fields. To that end, Joe Malrooney, a part-time instructor at the college and a full-time compliance specialist with the Delaware Department of Natural Resources and Environmental Control (DNREC), set up a meeting with Pete Scott, Ph.D., the founder of the environmental program at Linn-Benton College in Oregon, while Scott was in Washington, D.C., on business.

"Dr. Scott had a great two-year degree program already established, and he was generous enough to share it with us," said Williams. "He gave us the curriculum, told us what we needed to do, and put us in touch with his staff. We took the curriculum and modeled it for Delaware establishing a two-year degree program: Associates of Applied Science and Environmental Technology. This degree prepares students to take the licensing examination as well as to move up in the environmental field and earn more money."

The college began offering the program in 1995 and has already graduated 10 students. Williams is proud to say all 10 have secured jobs in the water and wastewater industry.

Updating courses

Now that the Environmental Training Institute had established itself, in 1996 the DNREC awarded it a contract to update and rewrite the state's wastewater operator training course and licensing examination. "The course was outdated because the technology had changed," said Williams.

"We updated all four levels of the wastewater operator certification. Each course was expanded to include 48 hours of training delivered over a 16-week period. We added new technologies such as spray irrigation, microbiology,

information on onsite systems, and more math," said Williams.

The updated course has been well received. "It's more work for the operators, but once they get through the course they are ready for the state test. We have only a five percent failure rate," said Williams.

Training in the field

In addition to its courses and degree program, the Environmental Training Institute has operated Delaware's 104(g) operator outreach program since 1995. Lenny Gold and Doug Abbott are the onsite trainers who work with small municipal plants to get them into compliance and provide technical assistance to any plants that need help. Williams is quick to point out that he hooked up with these trainers through Jake Bair.

Recognizing operators

In 1997 the training center started the water and wastewater "Operator of the Year" award in cooperation with DRWA, DNREC, the Delaware Department of Public Health, and the Eastern Shore Chapter of the Water and Wastewater Operators Association.

"Each year on Earth Day—April 22—we recognize the state of Delaware's water and wastewater 'Operator of the Year' with a plaque and \$500 cash award at a luncheon for all operators," said Williams. The winners also have their names inscribed on a plaque displayed at the Environmental Training Institute.

More than 100 people attended the ceremony in 1998 to watch Mike McCabe, EPA Region 3 administrator, make the awards to Heather Sheridan, chief wastewater operator for Sussex County, and Tony Gersitz, chief water operator for the city of Dover.

Williams said he is not aware of any other state that recognizes its environmental professionals. "You see a lot of other public officials, such as policemen and firemen, getting awards. We decided it was time to start and recognize the important work our environmental professionals do."

Building on success

As if all of these activities are not enough

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Mike McCabe (right), U.S. EPA Region 3 administrator, presents Tony Gersitz, chief water operator for the city of Dover, with the 1998 Delaware "Operator of the Year" award while Jerry Williams, program manager for the Environmental Training Institute observes.

Delaware training center starts late, makes its way to the top

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to keep the center busy, it is currently working on several important projects and initiatives. According to Williams, the center is busy updating and rewriting the state's drinking water certification course and examination and is scheduled to have it completed by the fall of this year.

Williams is also working with Rodney Wyatt of the Delaware Onsite Wastewater Recycling Association and state regulatory agencies to develop an onsite wastewater training center that will have approved onsite systems built above ground. One acre of land adjacent to the training center has already been identified for the center and funding sources are being located.

Williams attended a conference of onsite training center directors sponsored by the National Environmental Training Center for Small Communities (NETCSC) in 1997 that he found very helpful. "We'll be taking the best aspects of other training centers and NETCSC course material to tailor to Delaware," said Williams.

"We'll put teams together using people in the industry to write the courses—we are not working in an ivory tower," said Williams. "We'll have courses to train pumpers, inspectors, contractors, and engineers."

This spring Williams will make site visits to North Carolina and Rhode Island to see their onsite training centers. He hopes to design the center in the fall and begin construction next year.

NETCSC sponsors training academy for onsite directors

The National Environmental Training Center for Small Communities (NETCSC) and the Consortium of Institutes for Decentralized Wastewater Treatment sponsored an Academy for Onsite Training Center Directors on March 4 to 6 at the South Texas International Onsite Wastewater Treatment Training Center in Weslaco, Texas.

The academy was designed to assist training center directors, staff, and their training partners in developing the best onsite wastewater training programs possible.

NETCSC plans to share information presented at the academy with other interested parties.

For more information, contact Richard Phalunas, Ed.D., NETCSC director, at (800) 624-8301 or (304) 293-4191, extension 5514, or you may send e-mail to him at rphalunas@wvu.edu.

In the meantime, Williams worked with Hollis Warren, president of the National Association of Waste Transporters, and Dick Thomas with the Wastewater Environmental Contractors Association to bring Dave Gustafson and Dave Anderson from the University of Minnesota to the center to teach an onsite system seminar.

Planning ahead

According to Williams, there is a shortage of people going into the environmental field. "We have the Jobs Bulletin Board for the whole state at our center, and we don't have enough people to fill all the positions," said Williams. "It's a wide open field and these jobs will never go away. It's a good career, and it's well paying."

To encourage more people to go into the field, Williams is working with George Wright, executive director of the Delaware League of Local Governments, to sponsor an initiative that would provide state funds to allow all municipal water and wastewater operators in Delaware to attend Delaware Tech at no charge and provide scholarships for the two-year program in Applied Science and Environmental Technology.

"This initiative would help us turn out quality people in the field. It would help the industry, be good for the environment, and save municipalities money," said Williams.

Looking back

Williams acknowledges that it has been an amazing journey for the training center and that it would not have been possible without the full support of Delaware Tech and the state's regulatory agencies. "In 1993 there was nothing. Now we have all this: a modern facility with a hands-on pump room, updated licensing courses, a credit degree program, the 'Operator of the Year' award, and an onsite training center in development. It's incredible."

When asked where he expects things to be 10 years from now, he replied, "Everything running smoothly, free training for everyone, the strongest trained environmental workforce in the U.S., and a clean environment." Based on what Williams has accomplished so far, there is no doubt that the Environmental Training Institute will realize these goals in half the time.

For more information on the Environmental Training Institute at Delaware Tech, contact Williams at (302) 856-5776. ♦



New certification guidelines affect states, water systems, and training

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continuing training to maintain their certification. These requirements already exist in some states, but one or both requirements may be new in other states.

"We're not faced with a lot of changes to our program [in Arkansas] to be substantially in compliance," says Nutt.

But South Dakota, like a number of other states, will need some legislative changes to meet the new guidelines. Program officials will also have to make "tweaks" to the state's regulations, according to Robert Kittay, who runs the operator certification program in South Dakota.

"The bigger task may be in compliance," he says, referring to the work still ahead to get all operators certified. South Dakota had not required all systems serving fewer than 500 people to have certified operators, unless those systems used chlorination or surface water.

"We did give a lot of latitude and flexibility to states," says Herbert Pratt, an operations and management specialist with the Community Resource Group, in Louisiana. He was a member of one of the working groups that helped EPA prepare the guidelines.

"States have a lot of diversity in needs—from the Eastern states to the Midwest to the West. But we wanted to give them a concept to look at in these guidelines," Pratt continues. "This is what each program needs to contain, but each will be state specific."

Under the new guidelines, for instance, defining the size of systems in various certification categories, or deciding the level of training for operators or types of examinations to give, will still be left up to states.

"The guidelines leave flexibility up to the state to decide what operators need to know," says Naylor. "Some systems are very small and not very complex, so the required knowledge for certification may not be very extensive in some cases."

Once states do make changes to their operator certification programs, they must submit them to their regional EPA office to determine whether the program "meets the requirements of or is substantially equivalent to these guidelines," according to the actual document.

According to Naylor, EPA will use public health objectives as a guide in evaluating state programs to determine if they are "equivalent" to the guidelines.

"These evaluations will define and clarify a lot," says Pratt.

Operators must become certified

"The second wave of impact will be on operators," says Nutt.

"The most affected are going to be those operators who were in categories that didn't require certified operators," says Pratt.

Some states already require that all public water system operators, regardless of system size, be certified or licensed. Other states currently exempt operators of small systems, serving fewer than, say, 500 people.

Moreover, "Nontransient noncommunity (NTNC) systems—such as schools, hospitals, and factories—will be required to have certified operators," says Lisa Detherage, drinking water certification officer for Kentucky. "Most states don't require that."

"Very small water systems, often referred to as 'mom and pop' systems, will now have to have certified operators," says Stephen Ballou, executive director of ABC. Where certification programs did not already cover such systems, the states will have to inventory them and bring them under the program, he says.

But the guidelines have been developed to ensure the safety and reliability of drinking water—not to put competent operators out of work or penalize those who may not immediately meet the certification guidelines. To this end, the guidelines include an optional provision that allows states to "grandparent" operators of existing systems that require a certified operator for the first time because of state law changes resulting from the guidelines.

Kittay offers this advice: "For someone working at a small water system, maybe start taking classes now to prepare for the certification exam. The exams cover basic knowledge—elements of how to run a water system."

This may be easier said than done. "There's a monumental task to be done," says Nutt, referring to the challenge of reaching, training, and certifying the nation's drinking water operators, particularly those serving systems that will require certified operators for the first time.

Small system and NTNC operators alike may only have part-time responsibility for the water system, and often do not feel they can afford the time or money to attend training sessions, especially if travel is involved.

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Guidelines provide nine baseline standards

The new operator certification guidelines published by the U.S. Environmental Protection Agency (EPA) in February 1999 consist of nine baseline standards. These standards specify minimum requirements that states must include in their drinking water operator certification programs to avoid a 20 percent withholding of their Drinking Water State Revolving Funds. These standards are (in abbreviated form):

- 1 Authorization** – States must have legal authority to run the program.
- 2 Classification of Systems, Facilities, and Operators** – States must classify all community and nontransient noncommunity water systems based on indicators of potential risk, and ensure that these systems have operators who are appropriately certified for the systems' classification levels.
- 3 Operator Qualifications** – Operators must pass exams and have appropriate levels of education and experience. An optional provision allows states to "grandparent" operators of existing systems that require a certified operator for the first time because of changes to state law as a result of the guidelines.
- 4 Enforcement** – States must be able to enforce program requirements.
- 5 Certification Renewal** – States must establish training requirements for renewal, and require operators to obtain necessary amounts and types of approved training. The renewal cycle cannot exceed three years.
- 6 Resources Needed to Implement the Program** – States must provide enough resources to run the program.
- 7 Recertification** – Each state's process to recertify operators whose certification has lapsed must include a review of experience and training, and reexamination.
- 8 Stakeholder Involvement** – States must include ongoing stakeholder involvement in revising and operating their programs.
- 9 Program Review** – States must perform regular program reviews, which may include training relevancy and training needs through examination performance.

To obtain a copy of the Final Guidelines for the Certification and Recertification of the Operators of Community and Nontransient Noncommunity Public Water Systems, call the National Environmental Training Center for Small Communities (NETCSC) at (800) 624-8301 or (304) 293-4191 or the Safe Drinking Water Hotline at (800) 426-4791.

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Recognizing these small system needs, Congress authorized \$30,000,000 per year for fiscal years 1997–2003 to reimburse training and certification costs for operators of systems serving 3,300 persons or fewer. However, these funds have not yet been made available to the states, and it is not yet clear just how the reimbursement mechanisms will work.

EPA has been developing guidance on how the funds can be distributed and used. Draft "reimbursement methodology" guidelines will be issued in the near future for public review and comment.

States are very interested in this reimbursement funding, says Ballou, especially as they see greater demand for training—especially for small system operators—resulting from the new guidelines.

Training, assistance will be needed

Nutt identifies two categories of training that may be affected by the new guidelines. "There's training for renewal and training new operators to license them," he says.

Detherage points out that Kentucky, like a number of other states, has both types of training. "The biggest difference is that there's an

exam at the end of the certification (license) training. For renewal, there's no exam—operators attend to obtain training credits and pay a renewal fee," she says.

"Renewal training [in Arkansas] could come in the form of continuing education credits, or an American Water Works Association teleconference on the latest technology," adds Nutt.

"The demand for both of these types of training can be expected to increase under the new guidelines," says John Hoornbeek, training associate with the National Environmental Training Center for Small Communities (NETCSC). "However, these needs are likely to vary by state," he adds.

"Nothing in Kentucky's current law [or the new guidelines] requires operators to take certain classes before the test," says Detherage, though individual states may require preexamination training.

Hoornbeek points out that "the demand for preexamination training may increase as a result of the addition of new operators in smaller systems who may want or need training to be certified."

"We see a tremendous amount of turnover in small systems," adds Detherage. "Demand

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for operators will always be there, so demand for training will be there too.”

“The demand for renewal training may also increase in those states where continuing education requirements are being imposed for the first time, as is the case in West Virginia and several other states,” continues Hoornbeek.

“There are going to have to be new classes developed,” says Detherage. As states revise their programs to accommodate new small system operator classifications, new training courses will need to be developed to address the training needs of those new classifications.

So what should training and technical assistance organizations be doing?

“Trainers will have to stay on top of their state certification and drinking water program requirements so they know what it is that operators will need to know,” says Detherage.

“That dictates to a certain extent what operators will be tested on and need to be trained on. The purpose is to provide relevant training.”

“State certification officers should also be able to provide guidance on any requirements for approval of training,” adds Hoornbeek.

Nutt sees real potential in long-distance learning, such as teleconferences beamed by satellite to sites all over the country. While he suggests that distance-learning options may lose some give and take between instructors and students, he sees them as a good way to provide more training to more people who need it.

“Training also has to be accessible,” says Detherage. “That is, it must be affordable, physically accessible, and understandable to the operators.”

“The bottom line is that this is all based on safe drinking water,” says Ballou. “The last lines of defense for providing safe drinking water are the operators, and they need to be adequately trained to do their jobs.”

To obtain a copy of the Final Guidelines for the Certification and Recertification of the Operators of Community and Nontransient Noncommunity Public Water Systems, call NETCSC at (800) 624-8301 or (304) 293-4191 or the Safe Drinking Water Hotline at (800) 426-4791. To learn more about the drinking water operator certification program in your state, call your state’s certification officer. You may obtain these contacts by calling NETCSC and asking for Drinking Water Operator Certification for Drinking Water Operators and Maintainers (Item #TRBLOM02). Also see the box on this page for a list of relevant resources from NETCSC. ♦

NETCSC offers drinking water training resources

The National Environmental Training Center for Small Communities (NETCSC) offers resources that may help certification officers, operators, and trainers implement the new operator certification guidelines.

- *Final Guidelines for the Certification and Recertification of Community and Nontransient Noncommunity Public Water Systems*
TRBLOM10.....Free
- *Drinking Water Operator Certification for Drinking Water Operators and Maintainers*, a listing of state drinking water certification contacts
TRBLOM02.....\$2.60
- Drinking Water Training Curriculum Packages:
 - Introduction to Disinfection*
TRTPEP07.....\$97
 - Introduction to Water Distribution Systems*
TRTPEP08.....\$100
 - Introduction to Groundwater Sources*
TRTPEP12.....\$90
 - Bacteriological Sampling in Distribution Systems*
TRTPEP13.....\$85
 - Introduction to Surface Water Systems*
TRTPEP15.....\$100
 - Introduction to Water Treatment*
TRTPEP16.....\$82
- Customized searches for drinking water trainers and/or drinking water training activities. (Ask to speak with a training assistance specialist.)
- Support for specific training activities (as budget permits) through training partnerships. (Ask to speak with Sandra Fallon or John Hoornbeek.)

To obtain any of these materials or services, call NETCSC at (800) 624-8301 or (304) 293-4191.



Managing A Drinking Water System: NETCSC developing new short course for local officials

by Sandra Fallon
NETCSC Training Specialist



in conjunction with an association meeting in their home state.”

For local officials and utility directors who manage their communities' drinking water systems, nothing is more important than providing safe drinking water. Keeping up with all the technical, regulatory, management, and financial aspects of this critical task can seem overwhelming, especially for those who are operating under time and money constraints. If you are a local official who needs to learn more about managing a drinking water system, or if you train others to manage these systems, the National Environmental Training Center for Small Communities (NETCSC) is developing a new training package that may be just what you are looking for.

“Managing a Drinking Water System: A Short Course for Local Officials,” covers the basics of what local officials and other small system managers need to know to manage a system, keep it in compliance, and deliver clean, safe drinking water. The training materials are currently being developed and will be available in October.

“The need for this curriculum was originally established by NETCSC's 1994 National Training Needs Assessment and was reinforced by the capacity development focus of the 1996 amendments to the Safe Drinking Water Act,” said John Hoornbeek, NETCSC training research associate.

The course addresses:

- the local official's role in providing safe drinking water,
- a brief regulatory history and overview of current requirements, and
- developing and enhancing a system's technical, managerial, and financial capacity.

The course materials are designed to be easy for local officials and trainers to access and use, said Sandra Fallon, NETCSC training specialist and project manager.

“NETCSC talked to many local officials around the country about how they prefer to attend or receive training. The local officials identified a variety of options, including working on their own using self-study materials, attending an instructor-led session close to home (for example, at a training center), or in

A new approach

To meet these needs, NETCSC is taking a new approach in its curriculum development efforts. Self-study components are built into the curriculum design right up front. Local officials will be able to study and use the participant manuals on their own, at their own pace and convenience. The participant materials will be flexible enough so that they also can be used in an instructor-led training session.

Another feature of the curriculum is its modular format. Each of the 10 modules addresses one topic and is a stand-alone resource. A local official or trainer will be able to select and use one module, or a variety of modules, depending on their specific training needs at any given time. This flexibility is particularly important for local officials in small communities who want training resources that are concise, informative, and to the point.

Each module in the training package also will include a trainer's manual with accompanying resources, teaching aids, and visuals. The purpose of the trainer's manual is to guide the user in teaching the course to others. The manual will provide background information and resources, instructor notes, strategies for delivering the training, and evaluation tools.

A collaborative effort

NETCSC is working with a number of local officials, drinking water experts, trainers, and technical assistance providers to develop the training.

Bill Bliss, a township supervisor for 18 years in Wabedo Township, Minnesota, and a member of the Minnesota Association of Townships' board of directors, helped identify local officials' training needs. Bliss said that until five years ago, local officials in outstate Minnesota (agricultural areas) rarely had to build or manage community drinking water systems because residents used private wells.

“Today, more and more nitrates are being discovered in these wells, and local officials need information, training, and technical assistance to address this problem,” said Bliss. “We want these training materials to help make their jobs easier and to help local officials keep

continued on next page

NETCSC Call For Stories

NETCSC seeks information on successful curricula, product use

Have you attended a training session offered by the National Environmental Training Center for Small Communities (NETCSC)? Have you purchased a NETCSC product or training curriculum that has been useful in your environmental efforts? Would you like to receive a free NETCSC curricula or a discount on a NETCSC product? If so, NETCSC wants to hear from you.


“We are currently collecting information on the impacts of some of our efforts,” says John Hoornbeek, NETCSC training research associate. “We want to hear from people who have used our products and curricula.”

NETCSC has offered more than 70 training sessions on various small community environmental topics and provided hundreds of products to trainers, technical assistance providers, and others who work with small

communities. “We want to identify things we are doing that are working so we can do more of them and also learn what is not working,” says Hoornbeek.

NETCSC also would like to publish success stories in future issues of the *E-train* newsletter. By sharing your story with other *E-train* readers, you will be helping others to generate ideas on how to use NETCSC materials, publicizing your own training efforts, and helping NETCSC to plan for the future.

In addition, by sharing your story, you may qualify to receive a free NETCSC curriculum (value up to \$100) or a discount on NETCSC products.

Contact Mary Alice Dunn, NETCSC training specialist, at (800) 624-8301 or (304) 293-4191, extension 5538, or send e-mail to her at mdunn@wvu.edu, for more information on how to share your story with NETCSC. 



Managing A Drinking Water System: NETCSC developing new short course for local officials

continued from previous page

down the cost of providing safe drinking water to their communities.”

Bliss notes that presenting the information to part-time local officials who often have to travel great distances to attend training will be a challenge. “Giving local officials the option to work on their own using self-study materials is a very positive step.”


Stew Thornley, Section Education Chairman of the Minnesota Chapter of the American Water Works Association, is working with NETCSC to deliver a pilot session of the training to local officials and drinking water professionals.

“We feel it is important that elected and appointed officials, such as city administrators, mayors, and city council members, understand the basics of operating a public water supply system. NETCSC’s modular training package is designed to convey such information,” said Thornley. “NETCSC also has set up a system that makes it possible for local organizations to cosponsor the training in their area, and we hope to continue this relationship with NETCSC in conducting training for small communities.”

A welcome addition

Hoornbeek said that this training package, when completed, will enhance NETCSC’s

ability to assist local officials. “It will be a welcome addition to our existing wastewater, solid waste, and environmental system management curricula for this audience.”

For more information about “Managing a Drinking Water System: A Short Course for Local Officials” or to discuss options for partnering with NETCSC to deliver this training program, please call Fallon at (800) 624-8301 or (304) 293-4191, extension 5582, or send e-mail to her at sfallon@wvu.edu. 

Managing A Drinking Water System: A Short Course for Local Officials

Introduction

- I Local Officials’ Role in Providing Safe Drinking Water
- II Regulatory History and Current Requirements

Technical Capacity

- III Basics of a Drinking Water System
- IV Drinking Water System Operation and Maintenance

Managerial Capacity

- V Best Management Practices
- VI Working with Consultants and Technical Assistance Providers
- VII Personnel Management
- VIII Communicating with the Public

Financial Capacity

- IX Financial Management
- X Financing Options for System Projects or Upgrades

NETCSC Products List

The following products are available from the National Environmental Training Center for Small Communities. To place an order, call NETCSC at (800) 624-8301 or (304) 293-4191.

NETCSC Database Searches

TRBLCM07 Trainers Database	Cost varies
TRBLCM03 Training Activities Database	Cost varies
TRBLCM05 Training Organizations Database	Cost varies
TRBLCM06 Training Materials Database	Cost varies

Environmental Management

Training Packages

TRTPCD01 Basics of Environmental Systems Management for Local Officials/Training package	\$87
TRBLCD02 Basics of Environmental Systems Management for Local Officials/16 bound participant booklets	\$28
TRBLCD03 Basics of Environmental Systems Management for Local Officials/16 loose participant booklets	\$22
TRTPCD04 Working Effectively in Small Communities on Environmental Projects	\$61

Training Aids

TRVTOM06 Pollution Prevention for Vermont's Dairy Manufacturing Facilities	\$5.30
TRBKPP01 Public-Private Partnerships for Environmental Facilities: A Self-Help Guide for Local Governments.....	\$0.00

Training-Related Information

TRBLGN03 Small Community Characteristics and Human Resources Affecting Environmental Management: Building the Capacity of Small Communities Through Training	\$5.75
TRBKGN02 Final Report: Training Needs Assessment.....	\$9.05
TRBKRG01 A Guide to Federal Environmental Requirements for Small Governments	\$16.70

Drinking Water and Wastewater

Training Packages

TRTPEP06 Chlorine Residual	\$55
TRBLFN03 Managing Your Utility's Money/Instructor's guide	\$0.00
TRBLFN02 Managing Your Utility's Money/Participant's manual.....	\$11.25

Training Aids

TRBLGN01 The Power to Protect: Three Stories about Groundwater/Booklet	\$5.65
TRVTGN16 The Power to Protect: Three Stories about Groundwater/Video	\$30.65

Training-Related Information

TRBLGN04 Operator Training Opportunities	\$2
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Wastewater

Training Packages

TRTPEP01 Activated Sludge	\$120
TRTPEP02 Aerobic Digestion.....	\$110
TRTPEP03 Anaerobic Digestion.....	\$110
TRTPCD06 Assessing Wastewater Options for Small Communities.....	\$52
TRTPEP05 Centrifuge Test	\$60
TRTPCD07 Communicating Drinking Water Issues/Train-the-trainer manual	\$37
TRTPEP04 Concepts of Biological Treatment	\$117
TRTPEP09 Depth of Blanket	\$90
TRTPEP11 Fecal Coliform–Membrane Filtration Procedure	\$95
TRTPCD16 Industrial Pretreatment and Hazardous Material Recognition for Small Communities (for Wastewater Operators)/ Training package	\$86
TRTGCD17 Industrial Pretreatment and Hazardous Material Recognition for Small Communities (for Wastewater Operators)/ Instructor's guide	\$51
TRPMCD18 Industrial Pretreatment and Hazardous Material Recognition for Small Communities (for Wastewater Operators)/ Participant's manual	\$43
TRTPEP10 Lagoons: Facultative and Aerated ..	\$88
TRTPCD09 Onsite Wastewater System Operation and Maintenance (for Operator Trainers)/Training package	\$273
TRTGCD10 Onsite Wastewater System Operation and Maintenance (for Operator Trainers)/ Instructor's and participant's guides	\$43
TRPMCD11 Onsite Wastewater System Operation and Maintenance (for Operator Trainers)/ Trainer's Resources	\$241
TRRPCD12 Onsite Wastewater System Operation and Maintenance (for Operator Trainers)/ Operator's manual	\$36
TRTPEP14 Settleometer	\$55

Training Aids

TRVTOM01 Analysis of Biochemical Oxygen Demand	\$35
TRVTOM05 Identification of Filaments in the Activated Sludge Process	\$0.00
TRVTPE02 Microlife in the Activated Sludge Process/Video	\$0.00



TRBLPE01 Microlife in the Activated Sludge Process/Workbook.....	\$0.00
TRPKOM07 RTW Activated Sludge Troubleshooting Guide	\$49.95
TRVTPE05 Total Suspended Solids	\$22.90
TRPSOM08 Troubleshooting Guide for Lagoons	\$1.65
TRPSOM09 Troubleshooting Guide for Rotating Biological Contactors.....	\$1.65

Training-Related Information

TRBLGN18 Onsite Wastewater Training Directory	\$4.35
TRBKGN08 Wisconsin State Wastewater Center Study Guides	\$32.90
TRBLOM03 Wastewater Certification for Wastewater Operators and Maintainers	\$3.05

Drinking Water

Training Packages

TRTPEP13 Bacteriological Sampling in Distribution Systems	\$85
TRPMCD08 Communicating Drinking Water Issues	\$49
TRTPEP07 Introduction to Disinfection	\$97
TRTPEP12 Introduction to Groundwater Sources	\$90
TRTPEP15 Introduction to Surface Water Sources	\$100
TRTPEP08 Introduction to Water Distribution Systems for Operators	\$100
TRTPEP16 Introduction to Water Treatment	\$82

Training Aid

TRVTGN14 Protecting Your Groundwater Supply: Putting the Pieces Together	\$15
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Training-Related Information

TRBLOM02 Drinking Water Operator Certification for Drinking Water Operators and Maintainers	\$2.60
TRBKGN07 Wisconsin State Drinking Water Center Study Guides	\$10.10

Solid Waste

Training Packages

TRTPCD19 Economics and Marketing of Recyclables for Small Communities	\$66
TRTPCD05 Managing Groups and Conflict.....	\$70
TRTPCD24 Planning Solid Waste Management Options/Training package.....	\$66
TRPMCD25 Planning Solid Waste Management Options/Participant's manual	\$46
TRTPCD13 Reducing Commercial and Industrial Solid Waste (for Small Community Solid Waste Managers)/Complete package	\$72
TRTGCD14 Reducing Commercial and Industrial Solid Waste (for Small Community Solid Waste Managers)/Trainer's guide	\$46

TRPMCD15 Reducing Commercial and Industrial Solid Waste (for Small Community Solid Waste Managers)/Participant's manual	\$40
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Training Aids

TRBKMG01 Business Guide for Reducing Solid Waste	\$0.00
TRBKMG02 Decision Maker's Guide to Solid Waste Management, Second Edition	\$0.00
TRBKFN04 Determining the Economic Feasibility of a Solid Waste Boiler	\$11.50
TRBKGN15 Determining the Feasibility of Resource Recovery	\$11.25
TRBKOM04 Estimating Composition and Quantities of Solid Waste Generation	\$10.35
TRBKFN01 Estimating Solid Waste Transportation Costs	\$8.95
TRBKFN05 Full Cost Accounting for Municipal Solid Waste Management	\$10.10
TRBKPE04 Landfill Technical Guidance Manual	\$35.20
TRBLGN09 Media Interviewing Skills for Recycling Coordinators	\$5.75
TRVTPE06 Nuts and Bolts of Pay as You Throw Video Conference	\$13.35
TRPKTR12 Pay as You Throw Tool Kit.	\$0.00

Training/Adult Education

TRBLGN10 1995 Small Community Environmental Training Trends and Issues.....	\$3.75
TRBLGN05 1994 Small Community Environmental Training Trends and Issues	\$3.05
TRBLGN13 Annotated Bibliography for Training Evaluation	\$1.60
TRBLTR07 Computer-Assisted Instruction in Environmental Training	\$2.60
TRBLTR11 Coping with Varied Entry Level Skills: Tailoring for all Learners	\$15
TRBLTR03 Evaluating the Results of Environmental Training	\$2.90
TRBLGN17 Evaluating Training	\$4.75
TRBLTR08 Formative Evaluation of Environmental Training Programs	\$2.90
TRBLTR04 Instructional Design Considerations for Environmental Training	\$2.20
TRBLTR06 Interactive Video in Environmental Training	\$2.90
TRBKTR13 NETCSC Training Skills Handbook	\$8.50
TRBKTR01 Questioning Techniques for Trainers: Developing Critical Thinking	\$15
TRBLTR09 Summative Evaluation of Learners in Environmental Training	\$3.20
TRBLTR05 Teleconferencing in Environmental Training	\$2.75
TRBLTR02 Training Needs Assessment: Matching Techniques and Contexts	\$3.20

An interview with Gary Hudiburgh

EPA helping underserved communities

by P.J. Cameon
NETCSC Contributing Writer

Gary Hudiburgh stresses two new initiatives in discussing how the U.S. Environmental Protection Agency (EPA) can help small, underserved communities meet their wastewater treatment needs.

For the past year, Hudiburgh has served as chief of the Municipal Assistance Branch in EPA's Office of Wastewater Management. One of the main roles of the branch is getting information, financial resources, and technical assistance to underserved populations around the country.

The first initiative Hudiburgh cited is the *Clean Water Action Plan* to restore and protect America's waters. The plan, prepared by several federal agencies including EPA and the U.S. Department of Agriculture (USDA), outlines how the federal government and the public can work together to ensure clean, safe water for all Americans. "The *Clean Water Action Plan* is an important tool we are using at EPA to move forward in improving surface water quality and public health," Hudiburgh said. EPA and the USDA published the plan in February 1998.

The second initiative Hudiburgh stressed is described in EPA's *1997 Response to Congress on the Use of Decentralized Wastewater Treatment Systems*.

He said it is important for the branch to tackle new initiatives based on these documents, but without lessening existing assistance efforts. "We will not ignore the existing work we do with regard to small community outreach, technical assistance, and financing."

Clean Water Action Plan

The *Clean Water Action Plan* proposes "aggressive new actions" to ensure that the nation continues

to make progress in restoring and protecting its water resources. Among these actions are some basic assurances: that beaches are safe for swimming, water is safe to drink, and fish and shellfish are safe to eat.

The action plan emphasizes watershed management and enhancements to the overall health of aquatic systems. The action plan further states that the federal government can provide technical and financial help to advance watershed management, but these efforts will be successful only if states and tribes, the private sector, and the public work together.

Hudiburgh echoed the need to cooperate if the watershed approach is to be successful. "The plan calls for a lot of partnering and collaboration. Clearly, we cannot do it ourselves," he said.

The plan also contends that the public must have access to reliable information about water quality. Hudiburgh mentioned the wealth of such information available from the EPA Internet site and other sources. And he was quick to point out how organizations such as the National Environmental Training Center for Small Communities (NETCSC) can help spread the word to underserved populations that have few resources to gather that information on their own.

Decentralized Wastewater Treatment Systems Report

The *1997 Response to Congress on the Use of Decentralized Wastewater Treatment Systems* mentions several barriers that inhibit the use of decentralized wastewater treatment systems. These barriers include a lack of homeowner and developer knowledge about decentralized systems as well as legislative and regulatory constraints that deter or prohibit use of decentralized systems.

EPA has committed to taking some specific steps to support the use of decentralized systems. These include:

- developing voluntary guidance on centralized management of onsite systems,
- preparing a revised design manual for onsite systems,
- providing guidance on the use of Clean Water State Revolving Fund monies for onsite system purposes, and
- funding projects to demonstrate the applicability of onsite management programs.

While the lead for these efforts is with other parts of the agency, Hudiburgh's branch is playing an important support role, primarily

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Who is Gary Hudiburgh?

Since March 1998, Gary Hudiburgh has served as chief of the Municipal Assistance Branch within EPA's Office of Wastewater Management (OWM). Hudiburgh has held various positions in EPA since 1980, when he began working as an attorney in the OWM Permits Division. He has served as a technical advisor to the Navajo Nation Environmental Protection Agency and most recently was chief of the NPDES Program Branch at EPA.

Hudiburgh holds a bachelor's degree in mineral engineering/mathematics from Colorado's School of Mines, a master's degree in metallurgical engineering from the University of Missouri, and a law degree from Duquesne University in Pittsburgh.

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because of its management of the National Small Flows Clearinghouse (NSFC), National Onsite Demonstration Program (NODP), and NETCSC projects.

Role of Municipal Assistance Branch

An important function of the Municipal Assistance Branch is to assist small, underserved communities—or areas with fewer than 10,000 people and inadequate wastewater collection or treatment systems. The branch works with small communities across the country including Indian tribes, Alaskan native villages, and the economically disadvantaged colonias along the U.S.-Mexican border.

“The branch is involved in a wide variety of activities associated with assisting small and underserved communities,” Hudiburgh said.

Training activities include the Operator Training Program “to provide hands-on technical assistance and operator training to address compliance matters at small publicly-owned treatment works.” The program is often referred to as the 104(g) program, after the section of the Clean Water Act that authorized its formation. Other training activities include a cooperative agreement with NETCSC.

Branch technical assistance efforts include funding the NODP, which is managed by the NSFC. The NODP demonstrates the effectiveness of alternative onsite wastewater technologies. Technical assistance also includes a cooperative agreement with the Rural Community Assistance Program (RCAP), a national network of nonprofit groups that helps small communities meet Clean Water Act requirements.

Branch outreach efforts include funding support for NSFC, NETCSC’s sister organization. The NSFC operates a toll-free technical assistance hotline, produces the *Small Flows* newsletter and other publications, maintains an Internet site, and conducts other outreach activities that serve as resources for small communities. The branch staff maintains the Small Community Outreach and Education (SCORE) information network that serves as the branch’s outreach and information conduit for other small-community activities.

The branch’s other functions include water conservation activities under the Safe Drinking Water Act and Clean Water Act, Title 2 construction grants program, and special project grants contained in various Congressional and agency appropriations, including Mexican border activities.

Support for tribes emphasized

The branch provides direct grants and other financial assistance to Indian tribes and Alaskan native villages for wastewater treatment projects, and it is involved in an extensive effort to help the colonias areas on the U.S.-Mexican border.

Hudiburgh said EPA is working with NETCSC and NSFC to improve outreach and technical support to tribes. And under the operation and maintenance program, the agency is also looking to establish a training center at a tribal educational entity, he said.

“We have a goal to reduce the number of homes in Indian country that have inadequate wastewater treatment by six percent by the end of 2000,” he said. Funding for this effort has been earmarked from the Clean Water Act State Revolving Fund set-aside program.

Successful colonias efforts touted

Hudiburgh said the effort to assist the colonias is a great success story for EPA as well as the states of Texas and New Mexico. Colonias are small, isolated communities on the U.S. side of the border with Mexico.

“There have been a large number of projects constructed to provide sewage treatment to the there has been a large number of projects constructed to provide sewage treatment to the colonias,” Hudiburgh said. “There’s been concrete poured, there’s been dirt moved, and many of these operations are up and running.”

Hudiburgh said the colonias activities have addressed the needs of many people in a relatively

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Program highlights opportunities for youth

A modest, but interesting EPA program introduces economically disadvantaged youths ages 16–19 to career opportunities in wastewater treatment, water supply, recycling, and related environmental fields.

“Youth and the Environment” is a summer jobs training program that combines employment with academic training and hands-on experience. It will train 20 youths at sewage treatment facilities in five to six communities—both urban and rural—around the country this summer.

The program also aims to encourage teachers and local government leaders to participate in environmental education programs.

For more information on “Youth and the Environment,” contact Curt Baronowski, U.S. Environmental Protection Agency, 401 M St. S.W., Washington, D.C. 20460.

Training Skills: How to make a professional presentation using Microsoft PowerPoint®

by Susan Maczko
NETCSC Promotions Editor

Have you ever considered the use of graphic software? Perhaps you've been to a conference or training session and noticed how well the material was organized or how the transparencies came to life. Maybe you've wondered how you could improve your presentation. Now that you've entertained the thought, here are some things to consider.

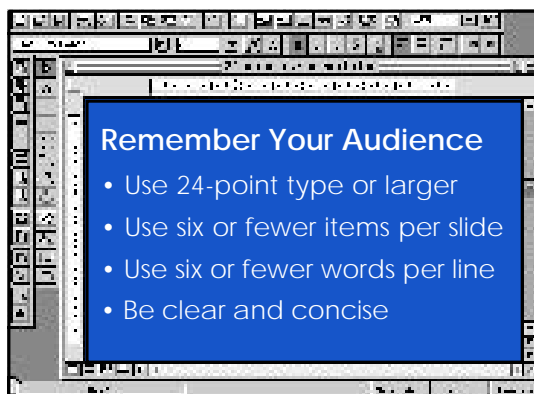
By using Microsoft PowerPoint® your training information can be conducted electronically from a laptop or personal computer onto the screen, or your transparencies can be viewed in black-and-white or in color using an overhead projector. You can even use 35-mm slides. At the same time, PowerPoint® enables the information to be prepared for speaker notes or handouts for the audience. This type of modern technology is user-friendly and will provide professional results, even for the novice.

Now that you know how your information can be presented, let's talk more about PowerPoint's® capabilities and how to get started.

Getting started

If you're using a personal computer with windows such as Dell or IBM, you begin the same way that you start other window programs—by using the “Start” button on the Taskbar to display the Start Menu and pointing to “Programs” for the Program Menu, then on to Microsoft PowerPoint®. For Apple Macintosh users, a double click on the PowerPoint® icon should get you started.

A PowerPoint® dialog box appears on the screen that offers you the choice of using the



AutoContent Wizard, a template, or a blank presentation. The AutoContent Wizard is the fastest way to create a presentation and the easiest for new users because it lets you choose a presentation category (general, sales/marketing, projects, etc.) that will help determine your style and structure.

Once the AutoContent Wizard is selected, click the “OK” button to begin a series of dialog boxes. After choosing your category, click the “Next” button in the dialog box and select the way to output the information—presentation, handout, or by the Internet. Click “Next” to choose the presentation style (on-screen, color overheads, etc.) and if printed handouts are needed. The last option asked for is the title of the presentation, the presenter's name, and additional information, such as the company or affiliation name. At this point the Wizard has created an outline of your presentation.

Changed your mind about the style or title you selected? No problem. Just click “Back” to go to the appropriate dialog box to make changes. Highlighting the text and typing in the new information can change the title. Satisfied with your choices? Click “Finish” to view the outline of your presentation.

As you look at your outline, you'll notice that the slides are numbered. Slide One is the presentation title and presenter's name. Subsequent slides are present with text that serves as placeholders for your text or graphics, which you will replace with your information. A slide icon to the right of the slide number allows you to view that slide two different ways. By clicking once on the slide icon, a small-scale view of the slide is shown to the right; by double clicking on the icon, a full-size view is in place, but you have left the Outline View. To return to the Outline View, select “View” in the Menu bar and click on “Outline.”

The Wizard has formatted the outline so that each slide title is followed by indented and bulleted text. To insert your text, highlight the placeholder and type in your information.

Remember your audience

It is important to remember your audience when creating your slides. Too much information on one slide may be confusing or just hard to read from their viewpoint. For example,

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You need to make a presentation? Tomorrow?

by Ron Freeman, CET, CTDM
NETCSC Contributing Writer



also a valid concern for presenters. These are factors that cannot be overlooked by managers and trainers. However, if you had a presentation design tool that would ensure your success and required only a little time to prepare, how would you feel about the presentation? Well, you do! It is called PowerPoint®, a Microsoft Office product. This software package can be loaded easily and used immediately.

What you can do with PowerPoint®

With Microsoft PowerPoint® you can literally design and develop a powerful presentation with just a few hours of work. This amazing software package can walk you through the entire setup process for a presentation. Then it provides you with step-by-step directions on how to design, develop, and deliver a winning presentation, removing all the anxiety and fear. (See article on page 16.) Nearly every textbook, instructor manual, student workbook, 35-mm slide, and overhead transparency can be redesigned to be presented in PowerPoint® with text, color, graphics, art, animation, and sound. You can design a presentation that will capture the attention of the students to enhance the learning process, win the approval of the boss, and deliver it from a laptop or desktop computer or even via the Internet.

What you get with PowerPoint®

Microsoft PowerPoint® features include:

- more than 160 professionally designed templates (with the ability to download

more via the Internet from Microsoft® absolutely free);

- a diverse palette of color schemes (background, text, and outline);
- five different views of your presentation (slide, outline, notes pages, slide sort, slide show);
- full draw and autoshape applications, if you want to be creative;
- a wide selection of clip art, with the ability to download your own from other graphic and art applications;
- the ability to insert drawings and charts from Microsoft Word® and Excel®;
- full text support, including optional fonts, sizes, styles, color selections, and special effects (shading or shadowing);
- the capability to design and print your presentation in handouts, speaker notes, or slide printouts in black-and-white or full color with graphics and art;
- the AutoContent Wizard, which walks you through the presentation setup and design;
- full animation with motion, sound, timing, and other effects;
- an Office Assistant that prompts you, answers your questions, and gives you guidance throughout the presentation design and development; and
- much, much more.

Internet and distance learning with PowerPoint®

Your meeting outlines, presentations, or training sessions can be packaged to be sent to a distance-learning site via the Internet. PowerPoint® has all the Internet features you need to package and present your ideas to others through this instructional media. For example, you can design a safety presentation and offer it to your employees/students over the Internet. Or just attach a link to your Web page to start a presentation to explain your training offerings, site locations, dates, and training fees to an Internet surfer who found your Web site. With PowerPoint® the possibilities are endless in the design and delivery of effective presentations. ♦



How to make a professional presentation using Microsoft PowerPoint®

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headings or titles should be in a larger font than subheadings, and subheadings should be typed in the order you plan to present them. A font size smaller than 24 is discouraged because the audience will not be able to see the text. A general rule to consider is no more than six items per slide with six or less words per line. (This is one time that it is all right to use incomplete sentences by leaving out pronouns and adjectives.) The text must be clear and concise so the audience will understand it. The slide presentation should enhance your oral presentation, not replace it.

As you type in your information, do not panic if there are too many or not enough bulleted placeholders. For too many placeholders, press the "Backspace" key to delete the unwanted text character by character, or highlight the entire phrase and press the "Backspace" or "Delete" key. To add another bulleted phrase item, place the cursor at the end of the last bulleted phrase and press "Enter." PowerPoint® will automatically insert a bullet for the next item in the list in the proper format.

Now is a good time to save your work. Select "Save As" from the File Menu, choose the folder you want the document to be saved in, name your presentation, and click "Save."

Reviewing your presentation

When all the text is in place, review each slide. Are there more than six items per slide? Do your slides complement your oral presentation? Does the information flow clearly and concisely from item to item or topic to topic? Are you pleased with the presentation? Will the audience be able to follow your presentation and learn from your information? If you answered "yes" to these questions, then you're nearly finished. A "no" response to any of these questions means you need to back up and edit the presentation.

If you have too many words in a line, go back and re-read the text. Delete unnecessary articles (a, and, the), possessive pronouns (your, its), and adjectives (very, most likely). For example, "it is necessary to schedule important meetings" can be condensed to "schedule meetings." Check to see if there are too many bulleted items on the slide. Information pertaining to the same subtopic can be continued on the next slide. To add a new slide, go to "Insert" in the Toolbar and select "New Slide."

The slides will complement your oral presentation if the items are properly organized. Read each item on each slide and compare them to your oral presentation. If the items are not in the same order on the slide as you plan to introduce them, rearrange the bulleted items to the correct order. Clicking on the bullet (the cursor changes to a weather vane) and dragging the highlighted item to the desired position easily does this. A subtitle can become a bulleted item and a bulleted item a subtitle by clicking within the item to be changed and clicking the "promote" or "demote" arrows on the outline Toolbar (also found under Formatting in the Toolbar).

Entire slides can be deleted if necessary. Just select the slide while in Outline View, click "Edit," then "Delete Slide" or use the "Backspace" or "Delete" key. If you delete the wrong slide, select "Edit" from the menu and select "Undo." The slide will reappear.

So far the work has been viewed in the Outline View. Although it is easy to see all or most of the text at one time, it does not allow you to see how the finished slides will look during your presentation. While in Outline View, place the cursor on Slide One. Click on "View" in the Toolbar and select "Slide." Now you can see a full-size slide. By moving the cursor on the right scroll bar, you can view each slide. If further editing is necessary, you do not have to change back to the Outline View, it can be done in Slide View. Just highlight what needs to be changed and type or select the desired text and drag where you want it. It is also possible to cut and paste in PowerPoint® the same way you would in a word processing document.

Choosing colors and backgrounds

Another advantage of viewing your presentation in Slide View is that you can decide if the color and format of the background and text is what you want to use. The Wizard automatically provides a template that decides the color of the background and text as well as the type and style of titles and other text. If you prefer, you can change these. When choosing the background and font colors, it is important to remember the audience and consider the type of presentation you selected. If you are going to use overheads, a light background with dark text is preferred; an on-screen or 35-mm slide presentation should have a dark background with light text.

To change the color scheme, choose "Format" on the Toolbar, select "Slide Color

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Scheme,” then “Custom.” A dialog box appears that allows you to select the background color, the text color, and the title color of your choice. Click on “Apply to All” and each slide will be changed. If you want to change the type size or font style, select “Format” again, then “Font.” After making your selections, click “OK” and you will be back in Slide View. Scroll through the presentation once again to make sure that the changes will work for your presentation.

Creating notes and handouts

Speaker notes can be created at the same time as your presentation. When the slides are completed, make sure you are back at Slide One (use the Scroll Bar if necessary). Select “View,” then “Notes Page” from the menu or the “Notes Layout” button from the Toolbar. You will notice that Slide One has a blank text box with the words “Click to add text.” By clicking in this area, you can add reminders such as “Smile, stand up straight, relax” to “Welcome attendees.” This is where you can add in anything that was not appropriate or would not fit on the slide, but needs to be mentioned in your presentation. For example, you may want to present a short summary of the

history of your company or organization. To add notes to subsequent slides, click the “Next Slide” button in the Toolbar or go to “Edit” and select “Repeat Next Slide.” When you’ve completed your speaker notes be sure to save your presentation.

The presentation and speaker notes are complete. Before printing, it is mandatory to do a final spell check on your slides and notes. Just select “Tools” from the menu and click on “Spelling.”

Now it is time to print. Click “File,” then “Print,” and the print dialog box appears. Select the “Print ‘What List’” arrow and select “Notes” to print your notes, then click the “OK” button. Next select “Handouts” (usually three per slide is selected) from the “What List” arrow and click “OK.” Finally, if you plan to make transparencies, select “Print” and “OK.” (Note: Macintosh users may not be able to choose the “Notes” selection.)

Your presentation is now complete. With the help of state-of-the-art software, you have organized your information into an effective electronic visual aid. In the future, when you are faced with a deadline, complicated information, or even a tough audience, you will be equipped with the expertise to create a visual presentation with impact! ♦

EPA helping underserved communities

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short period. According to EPA statistics, more than 280,000 colonias residents have benefited from these projects. “And there are many projects that are early in the planning and production stage. We’re eager to complete those projects.”

Right now the program is successful in addressing needs of colonias close to existing infrastructure, he added, cautioning that a real challenge will be down the road as the assistance effort focuses on more remote colonias. Alternative technologies may be needed to meet needs in the more isolated areas.

To date, approximately \$320 million in federal funding has been earmarked for colonias projects. One specific border activity that interests Hudiburgh is providing support for municipal wastewater treatment facilities near industrial operations. EPA hopes to provide training and technical assistance for pretreatment efforts so industrial effluent does not overwhelm those municipal facilities.

Partnering with NETCSC

Hudiburgh emphasized the need for local partners, stakeholders, and residents to fully

participate in all of these small and underserved community activities. “While the branch will certainly continue its efforts in these various projects, the real work to make changes to improve public health comes at the local level.”

Hudiburgh said he is proud of the community involvement he sees in local wastewater treatment issues around the country. He said NETCSC has outreach tools and connections that help spread news about these efforts to a broader small community audience.

“NETCSC plays a vital role in getting technical assistance to the audience,” Hudiburgh said.

For more information about the Office of Wastewater Management’s Municipal Assistance Branch, see the branch Internet site at www.epa.gov/OWM/smallc.htm. To contact Hudiburgh, write to him at U.S. Environmental Protection Agency, Office of Wastewater Management (4204), 401 M St. S.W., Washington, D.C. 20460 or via e-mail to hudiburgh.gary@epa.gov. ♦

Web sites promote environmental education

by Margaret Caigan McKenzie
NETCSC Contributing Writer

In a recent paper, "Why Environmental Education," Carol M. Browner, administrator of the U.S. Environmental Protection Agency (EPA) says, "Expanding information, expanding involvement: these are key to solving environmental problems—problems as small as the contamination of the local creek and problems as large as the black hole."

Browner explains that environmental education is for everyone including the young and the elderly, government officials and citizens, and businesses and educators.

According to EPA's Office of Communications, Education, and Media Relations, environmental education helps ensure the health and welfare of our nation by:

- protecting human health,
- advancing quality education,
- creating jobs in the environmental field,
- promoting environmental protection along with economic development, and
- encouraging stewardship of natural resources.

Recent surveys, however, illustrate the vast environmental illiteracy among Americans. For example, a November 1997 survey administered by the National Environmental Education and Training Foundation found that only 23 percent of respondents could identify the most common cause of pollution in streams, rivers, and oceans. (The correct answer is surface water runoff from yards, city streets, and farm fields.) The highest percentage of correct responses for any question was only 73 percent. Clearly there is a need for all of us to improve our environmental knowledge, attitudes, and behaviors.

Environmental Education Web site

To that end, EPA has created an informative, up-to-date Web site that promotes environmental education. Log on to EPA's Office of Education Environmental Education Web site at www.epa.gov/enviroe. EPA established the site to help satisfy the 1990 National Environmental Education Act that mandated EPA to provide national leadership to increase environmental literacy.



The Environmental Education Web site offers detailed information about grants, educator training, student fellowships, and long-standing environmental education programs and partnerships. Information is tailored to specific audiences (e.g., kids or a specific EPA region). The site also contains a variety of fact sheets about

EPA's Office of Environmental Education and a calendar of upcoming environmental education events.

The Environmental Education Web site walks the reader through the application procedure for environmental education grants. It even includes an on-line tutorial designed to help applicants write a better grant application to compete for a portion of EPA's two- to three-million dollar annual budget for grant funding. This section also describes more than 1,500 grants EPA has awarded nationally since 1992.

The site provides contact information for private and professional foundations that fund environmental projects such as the National Environmental Education and Training Foundation.

College students studying pollution abatement and control might be interested in EPA's National Network for Environmental Management Studies (NNEMS) fellowship program. EPA has provided nearly 700 fellowships under this program since it was established in 1986. The site provides a list of criteria that an undergraduate or a graduate student must meet to be eligible for the program.

For the environmental educator, this site lists specific methods for:

- increasing knowledge about the environment and environmental education;
- teaching schools or communities about the environment;
- using environmental education to improve students' critical thinking, problem-solving, and decision-making skills; and
- explaining the educational benefits of environmental education to colleagues.

The site also explains the cooperative agreements that EPA has with the Environmental

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Education and Training Partnership (EETAP). This five-year, nine-million dollar cooperative agreement was established to enable universities and nonprofit organizations to train and to support educational professionals, nonformal educators, and state and local education and natural resource officials. The site identifies and describes support resources that evolved from this partnership.

GLOBE

Another interesting Web site is globe.fsl.noaa.gov because it combines the efforts of scientists, students (kindergarten through high school), and teachers in studying and understanding the global environment. This site, formally known as the Global Learning and Observations to Benefit the Environment (GLOBE) site, is an international hands-on environmental science and education program that was started on Earth Day 1995. By that summer, more than 1,500 schools from across the U.S. were participating in GLOBE.

The GLOBE program is supported by the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration, the National Science Foundation, and the EPA.

This site tells the history of GLOBE, how GLOBE schools were established, and how students interact with GLOBE to monitor the atmosphere, hydrosphere, and biosphere to collect data for scientists.

For example, the GLOBE atmosphere/climate study site enables students to take daily readings of minimum, maximum, and current temperature, rainfall, and cloud coverage. Students report this data to the NOAA database. GLOBE uses this data and other NOAA national weather service products to create graphic visualizations that students can retrieve.

This student-collected data can provide scientists with reliable temperature and precipitation data that, for many regions of the world, has been sparse. This data can be used to study the local effects on cities, ground cover, and topography and to help international scientists answer questions about global change.

Master Composter

Finally, for a family-friendly, one-theme site, log on to www.mastercomposter.com.

Some of the information on this site includes:

- frequently-asked questions about composting,

- instructions for building compost containers and backyard composting piles,
- organic matter references with details on materials suitable for composting,
- listing of local composting programs, and
- two message boards (one for home compost troubleshooting and one for students working on composting projects).

This site provides a wonderful opportunity to learn about the familiar as well as the unfamiliar, for example, composting bamboo stalks, undesirable sheep shearings, or seaweed. Answers to questions are provided in nontechnical language so that the layperson can understand them.

A glossary of composting terms is also included to help educate the reader. Each week the “features” section is updated with a book review, a composting tip, or a joke.

This site links to other Web sites that include on-line composting activities and resources for teachers, for example, summaries of various student projects, instructions for incorporating composting into the school curriculum, and contacts for locating additional student curriculum.

The Web site does not have an archive for postings. However, posted information is reviewed often and incorporated into the “frequently-asked questions” section. No registration is required for this Web site.

For more information about EPA’s funding programs through the Office of Environmental Education, contact Diane Berger at (202) 260-8619 or e-mail her at berger.diane@epa.gov.

For information about National Environmental Education and Training Foundation grants, contact Michelle Harvey at (202) 628-8200 or e-mail her at harvey@neetf.org.

Resources for Global Sustainability, Inc., publishes an annual Directory of Environmental Grantmaking Foundations that contains information on private foundations that fund environmental projects. Call (800) 724-1857 for more information.

For additional information on the NNEMS fellowship program, contact Sheri Jojokian at (202) 260-5283 or fax (202) 260-4095.

For further information about the GLOBE program, write to GLOBE, 744 Jackson Place, N.W. Washington, D.C. 20503 or e-mail info@globe.gov.

For more information about the on-line composting site, e-mail Mary Tynes at marytynes@cheerful.com. ♣

trainingresources



Troubleshooting Guide for Lagoons

Developed by the Center for Training, Research, and Education for Environmental Occupations at the University of Florida and the National Environmental Training Center for Small Communities.

Content: This poster provides possible solutions to common wastewater treatment problems associated with lagoon operation. Six common problems are listed—odors, poor biochemical oxygen demand removal, high total suspended solids, poor fecal coliform removal, high pH, and low pH. Possible causes and solutions are provided for each of the problems.

Use: This poster can be used as an on-the-job troubleshooting aid or can supplement the National Environmental Training Center for Small Communities (NETCSC) curriculum, “Troubleshooting and Optimizing Wastewater Treatment—Lagoon Processes.”

TRPSOM08 Poster, 1998.....\$1.65

Contact: National Environmental Training Center for Small Communities, West Virginia University, P.O. Box 6064, Morgantown, WV 26506-6064, call (800) 624-8301 or (304) 293-4191, fax (304) 293-3161, or e-mail netc_orders@mail.estd.wvu.edu.

Troubleshooting Guide for Rotating Biological Contactors

Developed by the Center for Training, Research, and Education for Environmental Occupations at the University of Florida and the National Environmental Training Center for Small Communities.

Content: This poster provides possible solutions to common wastewater treatment problems associated with rotating biological contactor (RBC) operations. The poster lists in table form observations that indicate treatment problems, the probable cause, what to check or monitor, and possible solutions to the problem.

Use: This poster can be used as an on-the-job troubleshooting aid or can supplement the training curriculum, “Troubleshooting and Optimizing Wastewater Treatment—Attached Growth Processes.”

TRPSOM09 Poster, 1998.....\$1.65

Contact: National Environmental Training Center for Small Communities, West Virginia University, P.O. Box 6064, Morgantown, WV 26506-6064, call (800) 624-8301 or (304) 293-4191, fax (304) 293-3161, or e-mail netc_orders@mail.estd.wvu.edu.

Troubleshooting and Optimizing Wastewater Treatment for Small Communities

Developed by the Center for Training, Research, and Education for Environmental Occupations at the University of Florida and the National Environmental Training Center for Small Communities.

Content: This training package consists of four modules: activated sludge processes, attached growth processes, nutrient removal processes, and lagoon processes. Each module consists of an instructor guide with overhead transparency masters, a participant workbook, and a reference text.

Use: This training package can be used to help operators develop skills to troubleshoot or optimize their wastewater treatment processes.

TRTPCD32 Complete package.....\$179
TRTPCD27 Activated sludge module.....\$76
TRTPCD28 Nutrient removal module.....\$76
TRTPCD29 Attached growth module.....\$76
TRTPCD30 Lagoons module.....\$73
TRTPCD31 Reference text.....\$40

Contact: National Environmental Training Center for Small Communities, West Virginia University, P.O. Box 6064, Morgantown, WV 26506-6064, call (800) 624-8301 or (304) 293-4191, fax (304) 293-3161, or e-mail netc_orders@mail.estd.wvu.edu.

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Industrial Pretreatment and Hazardous Material Recognition

Developed by Environmental Training Consultants, Inc., and the National Environmental Training Center for Small Communities.

Content: This training package is designed to assist participants in reducing hazardous material entry into wastewater collections systems and minimizing negative impacts on treatment plant operations, sludge quality, and worker health and safety. Topics include federal regulatory requirements, hazardous material recognition and concerns, site inspection procedures and considerations, and corrective action programs.

Use: The participant materials include case studies, sample letters, inspection forms, a glossary, sample ordinances, and a copy of the federal pretreatment regulations. The trainer's materials include all of this plus module summaries, instructor's notes, and slides.

TRTPCD16 Complete package.....\$86
TRTGCD17 Trainer's materials.....\$51
TRPMCD18 Participant materials.....\$43

Contact: National Environmental Training Center for Small Communities, West Virginia University, P.O. Box 6064, Morgantown, WV 26506-6064, call (800) 624-8301 or (304) 293-4191, fax (304) 293-3161, or e-mail netc_orders@mail.estd.wvu.edu.

New handbook is valuable resource for environmental professionals

A new handbook bursting with great tips, innovative techniques, and fresh ideas for environmental trainers is now available from the National Environmental Training Center for Small Communities (NETCSC).

NETCSC Training Skills Handbook: A Reference Guide for Environmental Trainers will be an invaluable resource for any professional working in the environmental training field today.

The handbook is a compilation of the training skills articles published in *E-train* from the August 1992 issue through the Winter 1998 issue. These articles are rated the most informative and useful articles published in the

newsletter, according to a 1998 *E-train* readership survey in which 90 percent of respondents rated the training skills section "useful" or "very useful." This new handbook brings all of these articles together in one easy-to-use reference document.

Chapter headings include: Adult Education, Designing and Developing Curricula, Using Training Aids, Training, and Evaluation. The guide is three-hole-punched and includes graphics. The 8-1/2 by 11-inch format is easy to file, fax, copy, and update.

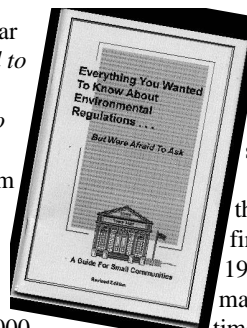
Cost for the handbook is \$8.50. To order a copy, call NETCSC at (800) 624-8301 or (304) 293-4191 and request Item #TRBKTR13.

Revised regulations handbook available

A revised edition of the popular handbook, *Everything You Wanted to Know about Environmental Regulations . . . But Were Afraid to Ask: A Guide for Small Communities*, is now available from the U.S. Environmental Protection Agency (EPA) Region 8.

The guide is designed to be a quick reference for small community officials in communities of 5,000 people or less. It is a summary of basic environmental requirements and agency guidance.

The guide provides information on air, land, water, and cross-media programs and covers both regulatory and voluntary



programs. Although the resources listed are specific to Region 8, the information on various environmental programs is applicable to all small communities.

The guide, which was prepared by the Midwest Assistance Program, was first published in 1990 and updated in 1993. This new edition includes the many changes in regulations since that time, especially with the amendments to the Safe Drinking Water Act.

To obtain a copy of the guide, call Pauline Afshar, Region 8 small community contact, at (303) 312-6267.

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