Conducted between 2002 and 2005, the National Environmental Services Center’s (NESC) Training Needs Assessment indicated that a well-developed training network—driven largely by certification requirements—exists for operators of environmental infrastructure but is lacking for others who are involved in wastewater, drinking water, and solid waste systems for communities of 10,000 or fewer residents. According to authors Craig Mains and John Hoornbeek, the training and technical assistance community needs to reach under-trained audiences and make effective use of different training approaches and technologies.

Training programs offered by major training networks were reviewed during a six-month period. For background in applicable mandates, the authors reviewed the Clean Water and Safe Drinking Water Acts. Eighty-two individuals (town administrators, plant operators, public works directors, transfer station/recycling center managers, regulators, technical assistance providers, consultants, and trainers from 50 states and Puerto Rico) were also interviewed for this study.

While those interviewed said they preferred conventional classroom training, they also said their biggest obstacles to training were time, money, and travel limitations.

The interviews also revealed a gap between the training needs local officials identified for themselves and the needs ascribed for them by others. Assistance providers and regulators participating in the interviews regularly identified more training needs for local officials than local officials identified for themselves.

The study revealed six areas of training needs:
1. financial management,
2. emergency preparedness training,
3. regulatory compliance,
4. wet weather flow issues,
5. decentralized wastewater treatment and management, and
6. municipal solid waste.
Financial management topped the list of local officials, utility board members, assistance providers, and consultants. Specific topics of interest were capital improvements planning, asset management, maintaining financial viability, retaining qualified operators, and understanding funding channels. Management courses, in general, and financial management courses, in particular, are offered less frequently than operator training courses. Despite an increasing awareness among training organizations about the need, financial management training is still not widely available.

Emergency preparedness training ranked high with system managers, plant operators, local officials, and assistance providers, partly in response to federal requirements, and partly due to concerns resulting from the September 11, 2001 terrorist attacks. All expressed a need for increased capacity for small communities to be able to respond to emergencies no matter what the cause of the disruption.

Regulatory compliance appeared to be acutely needed by drinking water system personnel due to a series of relatively complex regulations affecting a large number of systems. Regulations under the Microbial Disinfectants/Disinfection Byproducts Cluster (M-DBP Cluster) were of particular interest because of the potential for systems to encounter treatment conflicts while trying simultaneously to reduce microbial contaminants and disinfection byproducts. Participants indicated a need for training that addresses simultaneous compliance with multiple drinking water regulations, including information on using advanced technologies, such as membrane filtration and reverse osmosis, as compliance strategies. (For more information about simultaneous compliance strategies, see the “Tech Brief” insert in this issue of On Tap.)

Wet weather flow issues were identified as a priority wastewater training need. Inflow/infiltration of rainwater to sewage systems issues were considered high priority, reinforced by a series of recent wastewater regulations. The data indicated that fewer courses were offered for collection systems and stormwater systems than for treatment plant operation.

Decentralized wastewater treatment and management were also areas of significant training need. A lack of federal regulations for decentralized wastewater and a variety of regulatory approaches at the state and local levels present significant challenges to designers, installers, regulators, local officials, and system monitors and maintainers. Participants indicated a need for more technical training on different alternative systems, training on centralized management of decentralized wastewater systems, and monitoring and maintenance of decentralized systems. Fewer than half of the states currently have decentralized wastewater training centers.

Plus the perception among regulators, funding agencies, and engineers remains that decentralized wastewater treatment is a less preferable option than centralized systems. A number of participants also mentioned that a lack of enforcement at the state level meant there was little incentive for working toward, and verifying, adequate treatment.

Municipal solid waste was viewed as increasingly being managed at the county or multi-county level rather than the town or small community level. Nevertheless, priority training needs were identified including controlling illegal dumping for solid waste managers, local officials, and assistance providers and managing operational costs. Recycling center managers were interested in training on managing operational costs.

The complete training needs assessment is available on DVD and may be ordered from NESC at (800) 624-8301. Mention product #TRCDGN29. The cost is $10.00 plus shipping charges. The NESC Web site has information about the Clean Water and Safe Drinking Water Acts, as well as a small systems compliance chart at www.nesc.wvu.edu/netcsc/netcsc_regs.htm.

Attendees at the Environmental Training Institute for Small Communities, sponsored by the National Environmental Services Center each year in Morgantown, West Virginia, learn about water and wastewater issues confronting America’s small communities.

NESC Interim Communications Manager Trina K. Wafle has served as associate director of the National Research Center for Coal and Energy, where NESC is housed, for the last 17 years.

Brought to you by

34 On Tap Winter 2007