Exploring Alternatives

A New England onsite training program gathers designers, installers and regulators for a crash course on alternative residential systems

By Jim Kneiszel

New England onsite professionals are getting a glimpse into new national training programs designed to acquaint installers, designers and the regulators they work with, with residential alternative technology systems.

Working through Environmental Protection Agency initiatives, the New England Interstate Water Pollution Control Commission developed a one-day training program, "Alternative Onsite Wastewater Technologies." The conference was given as a pilot project to designers, installers and municipal water officials in Lakeville, Mass., last October and Waterbury, Vt., in November. With some adjustments, it will be brought to several New England communities this spring.

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Mixed reviews

Vermonters gave mixed reviews to the overview of alternative systems. Some designers believed the information was too basic, according to Allison Lowry, principal soil scientist for the Vermont Agency of Natural Resources. But Tom Groves, who developed the program for the New England commission, said many onsite professionals, especially installers, might find the introduction to alternative systems a helpful first step toward seeking new strategies for building residential systems.

Among the topics were distribution media gravel and gravelless technologies, collection and transmission components, pretreatment components, grease interceptors, aerobic treatment units, lagoons and constructed wetlands, according to Lowry. Groves, one of the presenters and director of wastewater and onsite training for the commission, described numerous residential technologies and touched on system selection strategies.

It was much more basic for people who aren't as aware of or familiar with these technologies," Groves said. "We showed them how different technologies work and what some of the benefits are. A few of the Vermont attendees thought it would be more design-intensive. We didn't have the time to go in-depth in step-by-step design criteria."

Expanding horizons

Mary Clark, a former onsite system designer and state regulator in Vermont, thinks the overview will help nudge designers, installers and local regulators into thinking about alternatives to traditional septic systems in situations where they make sense. Clark, now a project scientist for Stone Environmental Inc., Montpelier, Vt., attended one of the initial presentations and believes it will develop into a helpful national tool for onsite professionals.

When designers and installers start to explore alternative systems, it will enhance industry professionalism in standard septic systems as well, Clark said. "In this state, there's no regulation on installers, and they need education on the right way to install regular systems, too," Clark said. She believes everyone in the industry benefits when designers and installers get together for the alternative system introduction.

"If the installer understands why the designer wants to do something a certain way, that will make for a better product. They'll be able to build better systems," she said.

Mirroring a national trend, Vermont communities are starting to look at creative ways to serve more areas with a combination of municipal and onsite wastewater systems, Clark said. As rural developments move toward higher density in residential areas, alternative system designs will become more commonly accepted and the industry will adjust and grow with the technological requirements.

Reasons for learning

"Vermont is just starting to approve these advanced treatment technologies," Clark said. "And it's going to take a little time for designers and installers to get used to considering them as another tool in their tool box.'' According to the New England group's overview of the alternative system program, the EPA has noted several factors for pushing basic training for new technologies. They are:

- Only about one-third of the land in the United States has soils suited for conventional subsurface soil absorption fields.
- System densities in some areas exceed the capacity of even suitable soils to assimilate and treat wastewater.
- Many systems are located too close to groundwater or surface water and others, particularly in rural areas with newly installed public waterlines, are not designed to handle increasing wastewater flows.
- Conventional onsite systems in some settings might not be adequate for minimizing nitrate contamination of groundwater, removing phosphorus compounds and attenuating pathogenic organisms.

Education requirements

The challenge is to ramp up the technology learning curve and provide effective solutions to more residential onsite situations, Groves said. With installers, designers and regulators sitting side-by-side to learn new basic techniques, it should be easier to meet that challenge, he said.

"We're working toward a better education and understanding of technologies and how they can work and do the job," Groves said. "I think we've learned some lessons ourselves, and we're very happy with results of the first two (presentations). I feel like we hit the mark."

After more presentations and more changes to the program, the workshop will be published on the Web for other states and trainers to use, Groves said. Additional training sessions will be valuable, as the Vermont legislature in January may consider changes in continuing education requirements for system designers, Lowry said. For background on the training sessions in Vermont, go to the Web at www.anr.state.vt.us. ■