



Looking for Local Water Quality Information?

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Your Land-Grant University's Extension Service Can Help

Editor's Note: In 2008, Congress, through passage of the Food, Conservation and Energy Act, created the National Institute of Food and Agriculture (NIFA), which was previously called the Cooperative State Research, Education and Extension Service. Despite this name change, the university-based programs most people know as "Extension" are still referred to as the Cooperative Extension Service.

The Cooperative Extension Service (CES) has long been known for its 4-H youth programs, help with agricultural education, and homemaker programs. CES's mission is to advance knowledge for agriculture, the environment, human health and well being, and communities by supporting research and education programs in the land-grant university system. Specific areas of interest include best management practices for sustainable agriculture, responsible use of renewable resources and careful stewardship of natural resources.

Because water quality is vital to America's small communities and rural areas, CES's programs acknowledge that the effective management of water must include land-management activities. In October 2009, NIFA awarded more than \$11 million through the National Integrated Water Quality Program (NIWQP) to address the critical water resource issues of water quality protection and water conservation. A recent press release states, "The NIWQP supports research, education and extension projects and programs that address critical water resource issues in agricultural, rural and urban watersheds."

When it comes to handling wastewater matters, whether it is addressing homeowners' concerns or helping installers attain professional certification, states' Cooperative Extension programs vary widely as to what they offer and what support they provide. Depending on the each state's codes and regulations, the CES takes different roles.

Some states' programs concentrate on homeowner information while others take a leading role in educating and supporting the public utility workers, while others are somewhere in between. Some extension programs handle the certification and training of professionals, while others leave that up to other state agencies. While many states operate their onsite programs independently, some multi-state consortiums have been established, pooling limited resources to better address onsite treatment issues.

Minnesota's Onsite Wastewater Treatment Program

With more than one-fourth of Minnesota homeowners using onsite systems, wastewater management is an area of emphasis for the University of Minnesota's Extension Service.

sion's Water Resource Program. The Minnesota Onsite Sewage Treatment Program offers assistance and information about proper wastewater treatment for homeowners, small community officials, real estate agents and wastewater professionals. Their website states, "Our program seeks to protect public health and the environment by improving wastewater treatment through research-based education and outreach for homeowners, small communities, professionals and policy-makers."

Specifically, homeowners can find advice on the best management practices to keep their septic system functioning. Available resources include publications, workshops, and e-learning opportunities. Online resources include helpful links to topics such as how to locate a licensed professional and tips for seasonal care of your septic system.

To address the wastewater issues of the thousands of small communities in the state, Minnesota Extension endorses the use of a five-phase process. This decision-making process helps communities determine the appropriate wastewater treatment system considering all economic and environmental factors. From the website, links are provided that offer financial, management, and treatment options to officials and residents of small communities to help with this decision.

Minnesota's wastewater professionals can turn to the Onsite Sewage Treatment Program for the latest regulations, training, and certification.

The program's website offers professionals and engineers the latest information about certification

and licensing requirements as well as downloadable forms. There is a significant educational experience requirement for maintaining professional certification and the Sewage Treatment Program offers workshops through the year to help the state's wastewater professionals complete this requirement. Links provide information and resources for advanced designers and inspectors in addition to technical septic system options.

Research is another important component of the Minnesota program. One current research project involves sending waste from a milking parlor after being retained in a typical septic system to several different dispersal systems and further treatment.

New England Onsite Wastewater Training Program

Managed through the University of Rhode Island Cooperative Extension, the New England Onsite Wastewater Training Program includes full-scale demonstration systems of onsite technologies, educational programs for industry, local government, real estate, and the general public. This regional program provides training opportunities for residents of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

The New England Onsite Wastewater Program "educates the public and wastewater practitioners on onsite wastewater system issues, advances the use of innovative and alternative technologies to improve and protect public health and water quality, and to encourage sustainable development in the New England region." The program focuses specifically on innovative and alternative systems.

In operation since 1993, the Onsite Wastewater Training Center (OWTC) is a cornerstone of the Rhode Island program. Designed in cooperation with private sector contractors, the Rhode Island Department of Environmental Management and the U.S. Environmental

Protection Agency (EPA), this facility has 22 full-scale systems constructed above ground. These demonstration treatment systems allow participants a true hands-on experience with the different wastewater technologies.

OWTC classes range from basic introductory ones for homeowners to such topics as surveying techniques for onsite contractors and advanced soil morphology designed for wastewater professionals. Wastewater inspectors and installers may attain their certification with the center.

The OWTC has developed various factsheets, technical reports and instructional manuals that address wastewater topics



of interest to multiple audiences from homeowners to engineers. Research projects are also a major strength of the program, including a computerized mapping system targeting areas at high risk for septic system pollution and a study investigating the efficacy of drainfield aeration in onsite treatment systems.

The Pacific Northwest Regional Water Program

The Pacific Northwest Regional Water Program is a partnership between NIFA and four land grant universities: the University of Alaska-Fairbanks, University of Idaho, Oregon State University, and Washington State University, corresponding to EPA's Region 10. The goal of the Pacific Northwest Program is to "provide leadership for water resources research, education, and outreach to help communities, industry, and governments prevent and solve current and emerging water quality and quantity problems."

Recognizing that this area of the country continues to experience a population boom, the partnership strives to maintain economic growth while protecting wildlife habitat and sustaining the quality of life that draws people here. The safe and efficient operation of onsite wastewater treatment systems is included in the program's goals.

Texas A&M's Onsite Wastewater Treatment and Reuse Program

Part of Texas A&M's Agrilife Extension, the Onsite Wastewater Treatment and Reuse Program (OWT&R) provides information about managing domestic wastewater so people can make informed decisions when selecting, operating and maintaining their treatment systems. The program offers information for installers, inspectors, designers, regulators and owners of onsite systems.

The OWT&R Program features short courses across the state covering various topics throughout the year and operates three training centers especially designed to give wastewater professionals the opportunity to learn about many of the approved technologies available in a real-life setting.

The Texas program produces an extensive line of educational materials: books, factsheets, videos, journal articles and user manuals available for modest fees. These materials are specifically intended for the citizens of Texas; the latest state codes as they apply to wastewater issues are considered.

Your Extension—A good place to start

Whether you are a utility worker looking for certification training or a homeowner with septic system questions, your state extension can be a valuable source. And while your state might not offer some of the expansive programs as described above, it is a good place to start.

More Information

To learn more about the programs mentioned in this article, visit:

Minnesota's Onsite Sewage Treatment Program

(www.extension.umn.edu/OnsiteSewage/)

Rhode Island's Wastewater Management Programs

(www.uri.edu/ce/wq/RESOURCES/wastewater/index.htm)

New England Onsite Wastewater Training Program

(www.uri.edu/ce/wq/OWT/index.htm)

Pacific Northwest Regional Water Program

(www.pnwwaterweb.com)

Texas AgriLife's Onsite Wastewater Treatment and Reuse Program

(<http://ossf.tamu.edu/index.html>)

The Cooperative Extension Service is based at land grant colleges and universities in every state with offices in each county across the country. Find your local extension office at: www.csrees.usda.gov/qlinks/partners/state_partners.html.