Michigan State University Extension (MSUE) Comprehensive Onsite Wastewater Management Education Program

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Michigan Water Environment Association
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Extension’s Mission

Helping people to improve their lives through an educational process that applies knowledge to critical issues, needs and opportunities.
Smith-Lever Act

The Beginning of the Cooperative Extension Service

1914 – 2015

Over 100 Years of Researched-based Education
# MSU Extension Funding Partners

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<tr>
<th>Federal</th>
<th>State</th>
<th>County</th>
<th>Contracts/Grants</th>
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<tr>
<td>• USDA</td>
<td>• State Legislature</td>
<td>• County Board of Commissioners</td>
<td>Applied for based on current local</td>
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<tr>
<td>• Smith-Lever Act of 1914</td>
<td>• Land Grant University</td>
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<td>needs and issues identified by citizen input</td>
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Opening Statement of EPA’s Report to Congress in 1997:

“Onsite (decentralized) wastewater systems are here to stay! Those living in rural America must rely on their onsite systems for the long haul.”

“Adequately managed decentralized wastewater systems are a cost-effective and long-term option for meeting public health and water quality goals.”
Michigan ------

- Untreated/Partially Treated Wastewater from Municipal Systems: 29.4 billion gal/year
- Untreated Wastewater Released from Onsite Systems: ~9.4 billion gal/year (~10%)
- Number of Onsite Systems: ~1.3 million, ~28% of single family homes
- Permits for New/Replacement Onsite Systems: ~30,000 per year
- New Homes that will use Onsite Systems: ~50%
Michigan ------

The only State that does not have a Unified Onsite Wastewater State Code
“... on-site systems are not only a major component of the current wastewater treatment infrastructure in Michigan, but will continue to serve an important function in the treatment of sanitary sewage in the future.”

“Proper use of these treatment technologies will require properly trained soil evaluators, system designers, regulators, and system service providers along with effective management programs.”

“. . . having qualified individuals that design, inspect, install, provide maintenance, and regulate on-site wastewater systems is necessary to adequately protect both public health and the environment from improperly operating systems.”
MSUE Comprehensive Onsite Wastewater Management Education Program

1. Professional Program
2. Homeowner Education
3. Community Outreach
Professional Programs

http://events.anr.msu.edu/wastewater15/

* Continuing Septage Education (CSE) & Continuing Education Credits (CEC) offered
Professional Program

Key Ingredients of a Good Onsite Treatment System
Audience: Inspectors, Installers, Pumpers, Maintenance Providers
• The Soil Component – the heartbeat of the onsite system
• The Septic Tank and Its Function
• Pumps
• Pressure Distribution vs. Pump-and-Dump
• Advanced Treatment

Onsite Wastewater Treatment Design and Management
Audience: Designers, Installers, Inspectors, Maintenance Providers, Regulators
• Soil Application Systems
• Onsite System Site Selection and Analysis
• Use of Flow Equalization
• Alternative/Advanced Treatment Technologies
• High Strength and High Volume Wastewater (restaurants, grocery stores)
• Designing for Nutrient Removal
• System Management Programs
Professional Program Evaluation

Survey Results 2014:
• Course costs reasonable: 91% strongly agree/ agree
• Program content met expectations: 83% strongly agree/ agree
• Recommend the courses to colleagues: 75% strongly agree/ agree

Survey Results 2015 (preliminary):
• 66% felt the content met their expectations, the cost was reasonable and the time spent on individual topics was adequate
• 66% would be interested in additional Distance Learning trainings based on this program
2015 Michigan Onsite Wastewater Conference

Facilitated 6 roundtable sessions:

• **Topic:** “Homeowner Education”

• **Audience:** Sanitarians, pumpers, realtors, installers

• **Purpose:** Collect input on topics/locations/delivery methods for upcoming homeowner programs
Homeowner Program

Program Content:
– System Components
– Design & Operation
– Best Management Practices (use)
– Maintenance
– Local Regulations
– Alternative Systems
– Signs of Failure & Next Steps
– Water Conservation for Septic Longevity

Program Locations:
Homeowner Educational Materials

http://msue.anr.msu.edu/program/info/septic_system_education
Homeowner Program Evaluations

**Post-Program Survey:**

Over **98%** of participants indicated they increased their knowledge.

Nearly **52%** said they planned to make changes in their septic system practices such as:

- Pump tank more frequently
- Space laundry out throughout the week
- Watch what was put in system (garbage disposal use reduction)
- Be more aware of cleaning products
Homeowner Program Evaluations

Follow Up Survey:
Over 76% indicated making changes regarding septic use

Changes included:
• Spaced out laundry -69%
• Reduced water usage -56%
• Reduced use of garbage disposal -44%
• Had system checked by professional -44%
• Stopped putting grease, fats, oils down drain -44%

Over 95% shared program information with family, neighbors, co-workers
Septic Systems: Insight Into Your Onsite System Webinar

• Live Statewide webinar
• 240 registered / 137 participated
• Pre/Post survey results:
  – 80% indicated they planned to make change
• 6-month follow-up survey planned

Website for recorded septic webinar:
http://msue.anr.msu.edu/program/septic_system_education/resources_for_homeowners
Community Outreach

Public Service Announcement
Sponsored by MOWRA and MSU CANR

MICHIGAN STATE UNIVERSITY
College of Agriculture and Natural Resources

WKAR Public Media from Michigan State University
Potential Future Initiatives

Professional Program:
• In-Person for specific demand
• Webinars associated with in-person classes
• Self-Paced online courses with assessments
• Instrumentation laboratory
• Bus tours

Homeowner Program:
• Upcoming programs:
  Macomb, Barry/Eaton
• Update and expand MSUE’s Septic Educational web site resources, including news articles
• Develop additional online offerings
Contacts

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http://msue.anr.msu.edu/
http://www.egr.msu.edu/bae/

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