

# TRAINING BULLETIN 2023

Michigan Department of Environment, Great Lakes, and Energy  
Drinking Water and Environmental Health Division  
Environmental Health Section

## 2023 Online Wastewater Education 501(c)(3)

- LOCATION:** Virtual classes
- DATE:** Register via website [WastewaterEducation.org](https://WastewaterEducation.org)  
(<https://WastewaterEducation.org/Michigan.html>)
- TIME:** Not applicable – Arrangements made with Wastewater Education
- COURSE:** There is a total of 39 Webinar Based Courses
- INSTRUCTOR:** This varies and is under the direction of Ms. Dendra J. Best, Director of Wastewater Education 501(c)(3) Traverse City, Michigan.
- CREDIT HOURS:** **COURSES MUST HAVE A PASSING TEST SCORE OF 75%, TAKEN AT THE END OF EACH COURSE, TO BE ABLE TO OBTAIN THE CERTIFICATE** toward the Continuing Septage Education (CSE) requirements outlined in Section 11703 of Part 117. Only the CSE credits earned by the designated “responsible agent” for a given Michigan licensed septage firm will be credited to that firm.
- REGISTRATION:** For more information contact Ms. Dendra J. Best at 231-233-1806 or [Info@WasteWaterEducation.org](mailto:Info@WasteWaterEducation.org). Web address [WastewaterEducation.org/Michigan](https://WastewaterEducation.org/Michigan)  
(<https://WastewaterEducation.org/Michigan.html>).

### COURSES OUTLINE and AGENDA:

EGLE, in cooperation with Wastewater Education 501(c)(3) based in Traverse City, Michigan which is under the direction of Ms. Dendra J. Best, has approved separate courses for CSE.

The following credit hours webinar based CSE classes have been approved by EGLE. Correct answers of 75% will be the passing minimum plus there will be a written assignment for each component.

#### Available Class Topics

Safety Procedures: Basic primer on personal safety both as an employer and as a single business owner.  
Areas to be covered:

#### 2023 – 001a: Part One: Basic Electricity Common Sense Precautions (2.0 CSE)

As more properties have outdoor electrical service, and increasing numbers of advanced systems have electrical components, even if your role is just to service the tank – outdoor electricity can be deadly, both man

made and from nature. The federal Occupational Safety and Health Administration (OSHA) considers electrocution one of the “Fatal Four” prime causes of workplace fatalities and serious injury.

- Recognizing the limit of your ability
- Your liability for wrongful actions
- How to be 360° aware and anticipate electrical hazards
- Site specific features
- Overhead power lines and buried utilities
- Static electricity
- Lightning awareness
- Residential property – homeowner wiring

### **2023 – 001b: Part One: Basic Electricity Best Practices at the Job Site (2.0 CSE)**

- Pumps, panels, and components: best practices for quick disconnect prior to service work
- ARC Flash – the basics
- Vehicle electrics
- Best practices for recognizing and responding to a case of electrocution
- Resuscitation

### **2023 – 002a: Part Two: Common Sense Work Site Safety to Avoid Personal Injury and Liability (2.0 CSE)**

Areas to be covered referencing OSHA’s best practices:

- Gasses present in wastewater systems with reference to enclosed/ confined spaces. Positional asphyxia.
- Don’t be the second victim
- Hazardous/inflammable conditions
- Safe vehicle operation with particular attention to liquid transport vehicles
- Common sense personal hygiene
- Line of sight safety for construction and installation
- Basics of trenching and shoring
- Ergonomically safe lifting techniques
- Cell phone use

### **2023 – 002b: Part Two: Common Sense Work Site Safety: Response to Personal Injury (2.0 CSE)**

- How to respond to potential life-threatening situations when working alone
- Basic First Aid until help arrives
- Basic First Aid supply kit components

### **2023 – 003: OSHA Compliance for Wastewater Service Providers – a 7-Part Class Course**

The Michigan Occupational Safety and Health Administration (MIOSHA) has adopted major changes to its requirements for walking-working surfaces and fall protection in general industry. The rule revisions follow OSHA’s updates to its general industry standards addressing slip, trip, and fall hazards (OSHA Subpart D, Walking-Working Surfaces) and its revisions to its requirements for personal fall protection systems (in OSHA Subpart I, Personal Protective Equipment).

The effective date of the amended General Industry Part 2 Walking-Working Surfaces is February 2, 2020.

Overview: This series talks not just about the law and regulations but about the true costs in terms of lost work hours and income, and human life. Each of those workplace fatalities weren't just a sad statistic or a lost employee they were someone's father or mother, son or daughter, and each one is being mourned and missed.

These three Class Objectives are that you should be able to:

1. Relate what you heard to a real-life situation you either have or may face.
2. Gain the confidence to speak up when your own, or others, safety is at risk.
3. Realize the many costs of a work-related accident: health, insurance, personal, and financial.

There were 38 MIOSHA-related deaths in 2019 and 61 in 2020.

These classes will cover the requirements of Part 117 as it relates to both septic service and portable sanitation providers.

### **2023 – 003a: OSHA 'Fatal Four' for Wastewater Service Providers – Fall Protection Safety Standards (2.0 CSE)**

OSHA considers the "Fatal Four" prime causes of workplace fatalities and serious injury. The leading causes of worker death on construction sites were falls, followed by electrocution, struck by object, or caught-in/between.

These "Fatal Four" were responsible for more than half (58.1 percent) the construction worker deaths. An interactive 2-hour class will be taught online referencing the MIOSHA Part 45, Fall Protection Safety Standard. We will review recent publicized accidents and fatalities, and latest fall protection techniques and criteria. OSHA rules for fall protection take effect at six (6) feet. A quarter of all workplace injuries and fatalities involve a fall – some from less than four (4) feet. Mr. Sam Lines is an Authorized OSHA General Industry Trainer.

### **2023 – 003b: OSHA 'Fatal Four' for Wastewater Service Providers – Electrical Safety Standards (2.0 CSE)**

We will review recent publicized accidents and fatalities, latest protection, and safety best practices. Mr. Sam Lines is an Authorized OSHA General Industry Trainer. This class is a reminder to FULLY assess what you see before you start probing or digging! By law, everyone MUST contact MISSDIG, 8-1-1, at least 48 hours but no more than ten (10) working days (excluding weekends and legal holidays) before beginning ANY digging project.

ASK the homeowner – is there anything I should be aware of? LOOK around you – has anything changed since the last time you were there? Use your cell phone – take pictures of the site so you can check them next time you're there.

- Recognize the limit of your ability
- Your liability for wrongful actions
- What happens to you if you are electrocuted – It's The Current That Kills!
- Static electricity
- Pumps, panels, floats, and electrical component safety

### **2023 – 003c: OSHA 'Fatal Four' for Wastewater Service Providers – Crush, Caught-In/Between, Trenching Safety Standards (2.0 CSE)**

Preliminary summary of incident: On September 12, 2019, a 38-year-old Michigan laborer was caught in an excavation cave-in during sanitary pipe installation and was killed.

We will review recent publicized accidents and fatalities, latest fall protection and safety best practices and criteria. Mr. Sam Lines is an Authorized OSHA General Industry Trainer.

This is particularly important when you are working a job site with other contractors. When you work alone you can protect yourself with good working practices. When you work with other contractors you need to keep an eye open for multiple vehicle traffic.

As a note, OSHA has a rule called the multiple employer citation policy. By example, on 03/22/16: A 62-year-old excavator operator was clearing trees and debris related to a drain/sewer project. The operator dislodged a tree, which fell onto the cab of the excavator, killing the operator. Evaluate your work area. What hazards are present?

- OSHA cited an Ohio company after a 33-year-old employee was crushed to death in June 2016. He was digging soil out of the 12-foot trench when the trench walls around him collapsed, burying him in thousands of pounds of dirt. Rescue workers recovered his body a few hours later.
- Trench collapses are rarely survivable. One cubic yard of soil can weigh up to 3,000 lbs. – the weight of a small automobile – giving a worker in a trench little chance of survival when walls of soil collapse.

"Trench deaths have more than doubled nationwide since last year – an alarming and unacceptable trend that must be halted," said Dr. David Michaels, Assistant Secretary of Labor for the Occupational Safety and Health Administration. "There is no excuse. These fatalities are completely preventable by complying with OSHA standards that every construction contractor should know."

### **2023 – 003d: OSHA Guidelines for Bloodborne, Biological and Parasitic Safety Best Practices for Wastewater Service Providers (4.0 CSE)**

Safety Procedures: Basic primer on personal safety best practices both as an employer and as a single business owner. Areas to be covered will reference:

- Updated Center for Disease Control (CDC) Guidelines
- Understanding the difference between bacteria and virus structures
- Vectors for infection and recognition of symptoms
- Disinfection best practices
- OSHA personal protective equipment (PPE) guidelines and preventative measures
- Legal obligations and responsibility in the safe handling of human waste
- Public outreach and communication
- Common sense personal hygiene for contact and clothing
- Developing a spill response plan

### **2023 – 003e: Bugs without Borders – A Primer for Disease Vectors of Emerging Concern to Wastewater Service Providers (4.0 CSE)**

- Vectors for infection are changing, especially emerging infections, due to changing climate and weather conditions.
- Projected climate changes, and increased risk to service providers of exposure from insects and emerging pathogens, will be examined.
- Recognition of symptoms.
- This class will assess known risks and evolving CDC guidelines with particular relevance to COVID 19 and Michigan specific insect born disease.
- Areas to be covered will reference OSHA 1926.

## **2023 – 003f: OSHA Rules – PPE Gear (1.0 CSE)**

- Personal Protective Equipment: Certification of Hazard Assessment Form 29 CFR 1910.132(d) – how to fill it out, when to amend, assessing the risk of PPE gear during extreme temperature events. Proper maintenance and replacement schedule.
- There is confusion of when federal and or state rules apply. These two classes will cover both manager and employee requirements i.e., who is responsible/liable in the event of failure to supply/wear proper PPE gear, failure to approve PPE gear supplied by an employee, how to prevent other companies' employees, including drivers and contractor employees, from exposing Company employees to hazards, and how to address unacceptable contractor behavior.
- Determine which OSHA standards apply to the facility and periodically check to confirm that all required written programs, plans, training, and record keeping are complete and updated as required. Utilize company-wide best practices, but also ensure that your safety program is customized to your location as needed.
- Patrick Dennison is Co-Chairman of the Fisher Phillips Workplace Safety and Catastrophe Management Practice Group providing practical guidance to enable development and maintenance of effective workplace safety and health management programs. This series will be specific to onsite wastewater service providers and portable sanitation employers and will reference the following website links:
  - [OSHA.gov/DTS/Weather/Winter](https://www.OSHA.gov/Winter-Weather) (https://www.OSHA.gov/Winter-Weather)
  - [OSHA.gov/SLTC/HeatIllness/Heat index/](https://www.OSHA.gov/Heat-Exposure/Hazards) (https://www.OSHA.gov/Heat-Exposure/Hazards)

## **2023 – 003g: OSHA Guidelines for Working with Extreme Heat: Personal Safety and Health Related Issues (1.0 CSE)**

- Company participation in safety procedures under OSHA can increase productivity and profitability as well as the reduction in costs associated with workplace injuries, safety complaints, and disgruntled employees. These classes will cover policy outlining procedures to be followed by management and personnel in the event of an OSHA inspection.
- Some Michigan service providers are single business owners or have perhaps a couple of family members as employees, but some are sizable operations with many franchises.
- There is a lamentable cavalier attitude toward safety and safety training – the 'it will never happen to me' mentality. Onsite wastewater service personnel are exposed to multiple safety hazard exposures, especially during winter and summer, with increased exposure from either adding a non-approved layer in winter or shedding PPE gear altogether in summer.
- Mr. Travis Vance is Co-Chairman of the Fisher Phillips Workplace Safety and Catastrophe Management Practice Group providing practical guidance to enable development and maintenance of effective workplace safety and health management programs. This series will be specific to onsite wastewater service providers and portable sanitation employers and will reference the following website links:
  - [OSHA.gov/SLTC/HeatIllness/Heat index/](https://www.OSHA.gov/Heat-Exposure/Hazards) (https://www.OSHA.gov/Heat-Exposure/Hazards)

## **2023 – 003h: OSHA Guidelines for Working with Extreme Cold and Hypothermia: Personal Safety and Health Related Issues (1.0 CSE)**

Employers have a general duty to furnish workplaces free from recognized hazards. Part of that obligation is providing employees with personal protective equipment (PPE). This leads to a series of questions, such as: What types of PPE are required/preferable during cold weather?

Winter conditions can be brutal and especially hazardous for wastewater service providers who regularly work alone outdoors. This class will examine specific hazards, OSHA Rules, and best practices for working safely.

- Patrick Dennison is Co-Chair of the Fisher Phillips Workplace Safety and Catastrophe Management Practice Group providing practical guidance to enable development and maintenance of effective workplace safety and health management programs. This series will be specific to onsite wastewater service providers and portable sanitation employers and will reference:
- [OSHA.gov/DTS/Weather/Winter\\_Weather/Windchill](https://www.OSHA.gov/DTS/Weather/Winter_Weather/Windchill)  
([https://www.OSHA.gov/DTS/Weather/Winter\\_Weather/Windchill.html](https://www.OSHA.gov/DTS/Weather/Winter_Weather/Windchill.html))

### **2023 – 003i: OSHA Rules, Employer Policies and Employee Best Practices Concerning Opioid and Drug Use, Illegal and Prescribed (1.0 CSE)**

The opioid crisis has escalated dramatically in the past decade across the country, and those affected may also be some of your employees. At the same time, the marijuana legalization movement has grown, and several states now not only permit medical marijuana but also recreational marijuana. With the potential for more employees to be under the influence of both legal and illegal drugs, what can employers do to maintain a safe workplace? What restrictions are there for testing employees for drug use? This presentation will explore this issue.

This class explores the restrictions for conducting drug tests for employees, reviews best practices and how to manage the results.

What are the OSHA implications regarding drug testing?

What role does the Americans with Disabilities Act play?

- Patrick Dennison is Co-Chair of the Fisher Phillips Workplace Safety and Catastrophe Management Practice Group providing practical guidance to enable development and maintenance of effective workplace safety and health management programs. This series will be specific to wastewater service providers and portable sanitation employers.

### **2023 – 004: Dealing with Extreme Weather Events (2.0 CSE)**

As severe weather events become the norm, onsite system service providers will need to become aware of and trained for conditions which stress, damage or limit the performance of onsite wastewater systems. This class will review wet weather events, prolonged ice and snow cover, drought, and heat periods as well as natural disasters. Content addresses system performance and site servicing issues following such an event as well as disaster management and emergency response participation for portable sanitation providers.

### **2023 – 005: Best Practices for Portable Sanitation and Service Providers in Handling ‘Sharps’ and Drug Paraphernalia (2.0 CSE)**

Stop! Think! Look! Refer to your checklist!

Do you HAVE written policies and guidelines? If not start here.

- The object of this class is to be a Primer on personal safety best practices both as an employer and as a single business owner. Areas to be covered will reference Vectors for infection and recognition of symptoms.
- First Aid best practices and health care suggestions
- PPE guidelines and preventative measures
- Proper disposal
- Public outreach and communication
- Understanding risk

### **2023 – 006a: Starting and Operating a Septic Service or Portable Sanitation Business in Michigan (3.0 CSE)**

With the aging demographic of onsite business owners' opportunities are created for the takeover of existing licenses or founding of new business. The how, what, where and when can be a challenge to navigate. In this class a mentoring group of master professionals will go through a checklist of best practices for starting off on the right foot.

### **2023 – 006b: Employee Policies, Vehicle Inspections and Record Keeping (2.0 CSE)**

As a single business owner can you afford to be unable to work for an extended period of time? As an employer can you afford to have an employee file for Workers Compensation or sue you for injury on the job? What about lawful record keeping and licensing requirements?

Good policies are essential.

Attendees will learn how to create a personalized Safety Procedures Manual. Involving your employees in preparing a Safety Procedures Manual is both common sense and protects you from liability.

### **2023 – 006c: Shoulda, Woulda, Coulda – Being the Responsible Party. Your Options and Obligations for Avoiding Liability and Prosecution (3.0 CSE)**

Part 117, Septage Waste Servicers, of the Natural Resources and Environmental Protection Act, 1994 PA 451 requires that a business that pumps, transports and/or disposes of septage waste be licensed and designate a "responsible agent."

By being designated a Michigan "responsible agent" that person becomes liable for ensuring his or her business operates in compliance with both state law and prevailing local regulations. In October 2014 the headline read: "Man Sues Mom for \$4 Million Over Septic Explosion." In May 2014 the headline read: "Washington Pumper Sentenced to Prison for Illegal Dumping." In March 2013 the headline read: "Septic professionals indicted in bribery scheme." And perhaps the saddest of all from September 2014: "Septic Inspection Turns Deadly." Do you have an employee Handbook? Does it protect you from liability? Will it cover your legal fees if you have to defend from a situation like this from January of 2016: "Family rescues boy who fell into Denny's grease pit." In the eyes of the law YOU are the responsible party – are you covered?

This class will cover the requirements of Part 117 as it relates to liability and insurance for both septic service and portable sanitation providers against:

- Loss of license
- Criminal negligence – felony or misdemeanor?
- Employee negligence during the transport of hazardous human waste
- Proper vehicle coverage and liability for operation
- Vehicle maintenance: schedules and reports
- Groundwater or surface water contamination
- Health and safety – MIOSHA and Workers Compensation
- Accidental wrongful death or physical harm to the public
- Environmental damage
- Trespass
- Loss of business records
- Fire and theft

### **2023 – 006d Best Practices for Working with a Wastewater Treatment Plant (2.0 CSE)**

Most service providers in Michigan no longer land apply septage. How to deliver to a Wastewater Treatment Plant (WWTP), safety and best practices, manifesting and regulations will be covered in this class.

### **2023 – 007a: Assessing the Site for a First-Time Service Visit, or for an Established Client (2.0 CSE)**

Regardless of whether this is a new or an old established client, the site assessment begins with the initial phone call. Being prepared for what site conditions exist or to be prepared to ensure both safe working conditions, protection for yourself and the property owner.

This class examines how to review the site using online tools and what additional questions this might lead you to ask the property owner. Being prepared enables a pre-visit checklist. When you pull up in front of the property there are basic, common-sense observations to make before you begin work. Being 360° aware will protect your personal safety, the investment you have in your vehicles, ensure an efficient use of your time at the site, protect the client's property and, most important, cement the professional relationship you have with the customer. Good habits build great businesses.

Areas to be covered:

- In this session attendees will create a site-specific database record using standard software and/or Smart Phone applications.
- By recording observations, soil condition evaluations, and conditions at the time of visit, over time a pattern of use, or abuse, becomes evident.
- In this class, attendees will learn how to anticipate potential hazards such as:
  - Restricted access or movement on the site, tight driveways, or distance to the main roadway
  - Overhead lines, low hanging tree limbs, or soft shoulders
  - New structures
  - Evidence of recent underground construction or tampering with the system
  - Reported record of a malfunctioning system
  - Small children or dogs
- This becomes an education and marketing tool to build a strong relationship with the property owner and a valuable reference tool for yourself or a new employee visiting this property for the first time.

### **2023 – 007b: Assessing the Site for Portable Sanitation Service and Placement (2.0 CSE)**

Regardless of whether this is a new or an old established client, the site assessment begins with the initial phone call. Being prepared for what site conditions exist ensure both safe working conditions, protection for yourself and the property owner. Are you asking the right questions? Do you have a site preliminary checklist?

What is the timeline for completion?

This class examines how to review the site using online tools and what additional questions this might lead you to ask the property owner or other contractors working on the site. Such as:

- Will this be in use at night?
- Will my access be lit?
- Am I expected to provide lighting inside the units?
- Is the area itself well lit?
- Where is the outside electrical supply?
- What is my liability for slip and fall, a criminal act, property damage?
- What is my liability if I have a spill?



Whether it's for 12 or 200 – how you place, and service, will either make you a client for life or break your business.

Assessing the site will focus on seven (7) main items:

Is the site safe, can I access it, can I service it, how many people/how many units, risks, invisibility, hygiene?

### **2023 – 007c: Checklists, Inspections and Disclosure Forms (2.0 CSE)**

Service providers routinely do system inspections, both on occupied properties as part of a normal service call, but also on a property that has sat empty for an extended period of time. There are legal and ethical considerations; and development of sound policies and procedures are essential.

Utilizing checklists for all service visits is a best practice to ensure nothing is overlooked. Creating a Disclosure Statement is good business practice for many reasons. Recognizing the difference between an inspection and an evaluation will be covered, also best practices for collecting system samples for performance evaluation. This class will discuss best practices and options for official onsite inspector certification.

### **2023 – 007d: How to Use Google Earth Pro, and USDA NRCS Web Soil Survey (1.5 CSE)**

In the class titled Assessing the Site, service providers were introduced to the tools available to them to look at the location beforehand, assessing best access routes, anticipating logistical problems. This class is both for service providers and installers.

This class will allow attendees to experiment, and to review, an actual site using:

- Google Earth's layers and functions
- Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) and provides access to the largest natural resource information system in the world. NRCS has soil maps and data available online for more than 95 percent of the nation's counties and anticipates having 100 percent in the near future. The site is updated and maintained online as the single authoritative source of soil survey information. It is an invaluable tool for assessment and troubleshooting onsite systems. See the following website link:  
[WebSoilSurvey.NRCS.USDA.gov/App/HomePage.htm](https://WebSoilSurvey.NRCS.USDA.gov/App/HomePage.htm)  
(<https://WebSoilSurvey.NRCS.USDA.gov/App/HomePage.htm>).
- SoilWeb – an online tool developed by UC Davis

### **2023 – 007e: Soil Profiles in Michigan: A Basic Primer for Troubleshooting and Servicing Systems and Land Application Best Practices (2.0 CSE)**

In the class titled How to Use Google Earth Pro, SoilWeb USDA, NRCS, and Web Soil Survey, service providers were introduced to the tools available to them to look at and assess the system location beforehand.

This class is an expansion of an understanding of soils and geology in Michigan and how this affects systems best practices.

This class is for both service providers and inspectors. Taught by Mr. Paul Finnel, past manager of the WebSoil Program at NRCS.

### **2023 – 007f: The Basics: An Introduction to Wastewater Treatment Processes and Microbiology for Package Treatment and Septage Receiving (2.0 CSE)**

An interactive live two-hour introduction to the absolute basics of how biological wastewater treatment systems and microorganisms operate.

This class is both for those at the very start of their careers as well as those who would just like to know more about the hidden world of microbes!

We have good health in this country because we train professionals to understand how biology and chemistry make wastewater treatment systems work.

Come learn the basics!

It's been since 1911 that the United States has had a major outbreak of Cholera but preventing incidences of waterborne illness are the central reason environmental professionals strive for excellence in wastewater system design, operation, and maintenance.

Wastewater practitioners must start somewhere on their long road to becoming a professional operator.

### **2023 – 008a: Understanding Conventional Systems – Tank Servicing, Cleaning, and Inspecting (2.0 CSE)**

How they work, what to look for, in the home, inlets, outlets, tank construction, tank issues, effluent filters, measuring and observations, and inspecting the drain field; when to do borings, where, and what you may find.

### **2023 – 008b: Understanding Conventional Systems – Treatment Fields Servicing, Troubleshooting, and Inspecting (2.0 CSE)**

How they work, what to look for, and different media. Inspecting the drain field, when to do borings, where, and what you may find. Groundwater issues, surface water discharge and hydrologic flow. Understanding and recognizing local soils.

### **2023 – 008c: Understanding Conventional Systems – The Basics (2.0 CSE)**

For many long-time service providers, just when you think you've seen it all, a surprise waits for you! Reminding yourself of best practices for servicing conventional systems is a good refresher, especially as there may have been changes and additions to the system since your last visit. In this class, service providers will be encouraged to share stories and experiences, including finding a tank installed backwards and having to use a chainsaw to punch a hole in a tank filled with 'disposable wipes!' This class dovetails with Assessing The Site.

### **2023 – 008d: Understanding Servicing Holding Tanks, Pump Chambers (2.0 CSE)**

In this class we will review the reasons these components have been installed and the special challenges of servicing.

### **2023 – 008e: Understanding Servicing Mounds at Grade/Above Grade Systems (2.0 CSE)**

In this class we will review the reasons for use of low-pressure mounds, guidance documents and the special challenges of servicing.

### **2023 – 008i: Understanding Servicing Alternative Media and ATU Systems (2.0 CSE)**

In this class we will review systems components and the special challenges of servicing.

### **2023 – 009: PPCPs, FOG and ‘Flushables’ (2.0 CSE)**

A conversation about pollutants and their impacts on system performance, special needs for servicing and disposal. Pharmaceutical products, personal care products, pesticides, petroleum-based cleaning and plasticizing products and their effect on wastewater system performance and the environment. What to look for, basic safety precautions, legal considerations. Issues with acceptance by a WWTP.

### **2023 – 010a: Basic Math and System Calculations 101 (2.0 CSE)**

Rationale: A competency in basic math is essential to be sure the system is working correctly and can be professionally serviced. Areas to be covered:

- Basic refresher course in understanding calculations for area, volume
- Gallons per cubic foot
- Detention time and displacement
- Pump efficiency
- Event counters and timed dosing
- Flow rate

### **2023 – 010b: Basic Math and System Calculations 102 (2.0 CSE)**

- Soil loading rate
- Assessing bed and trench sizing
- Comparing design to “as built” specifications
  - Measure twice – pump once! Using basic and digital measuring devices
  - Pump distal head pressure
  - Coefficient of friction

### **2023 – 011: Best Practices for Land Application in Michigan (6.0 CSE)**

Michigan Septage Part 117 Statute. A refresher course, interactive series of component classes, for those with existing land application site on compliance, mapping, soil evaluations, licenses, renewals, extensions, and additions.

Also, as a learning tool for core competencies, a hypothetical site will be the subject for interactive testing.

Each class can be downloaded for offset completion and return for mentoring and live assistance session.

### **2023 – 012: Educating the Property Owner on Best Management and Operation Practices (2.0 CSE)**

Building a relationship of trust with the property owner is more than just a 'pump and go' event. Educating the public about their responsibility as an onsite system owner is compatible with your role as an environmental and public health professional. A recent study made the claim that the average adult has a 5-8th Grade understanding of science but a basic understanding of how a septic system works is essential to their performance and your ability to properly service them.

This class will cover resources available for you to develop communication skills and customize education services and messaging for the property owner to promote the reason we are all in this business – to protect public and environmental health:

- An appreciation, and understanding, of how their specific system works, using the Environmental Protection Agency (EPA) Septic Smart Tools and Resources.

- Helpful tips on how to cut down on both service and electricity costs by practicing water conservation – using EPA WaterSense™.
- Drain field and system protection best practices, understanding basic soil biology and structures and how this affects good treatment, and using resources available from NRCS.
- Seasonal issues – protecting the system and reserve treatment area in both freezing and drought conditions.
- Why there IS a reserve treatment area – explanation of Groundwater Awareness Week.
- Property use issues i.e., home-based businesses.
- Local/state regulations for the property owner to be aware of.
- A better appreciation of what you do as a service provider.

### **2023 – 013: Educating the Property Owner: Online Tool for Creating a Community/Individual Septic System Owner Guide (2.0 CSE)**

Residential and commercial properties rely on onsite systems to safely treat their wastewater.

Many of these systems serve clusters of homes through a shared “community” system which requires additional management and service considerations. The delivery of proper system management is a key issue to ensure cost-effective and long-term wastewater treatment for both new development and existing communities.

Community System Owner’s Guide (CSOG) helps community members and leaders understand how their system works, what management tasks need to occur on a regular basis, and how they can protect their infrastructure from premature failure. Using this tool, an engineer, septic professional, community facilitator, or educated community member is able to develop a guide to create an effective management, and service schedule, by entering basic information on the users, system, rate structures and any regional, state, or local differences in regulations that affect the management of community systems.

A team led by Ms. Sara Heger – Onsite Sewage Treatment Program in the Water Resources Center at the University of Minnesota, including Wastewater Education 501c3, has created [H2OandM.com](https://H2OandM.com/) (<https://H2OandM.com/>). An administration fee of \$10 will be charged to oversee the CEU requirement which is to answer a 10-question quiz about the tool plus create a System Guide Template for an actual site.

**Course Cancellation/Rescheduling:** Some courses may be cancelled or rescheduled due to low enrollment/registration or other reasons. EGLE is not responsible for any course cancelled or rescheduled by a course sponsor. Course sponsors are strongly encouraged to notify EGLE, and those who have registered for the course, in a timely manner when a course is cancelled or rescheduled prior to the date the course is scheduled to be offered. Course attendees from Michigan are encouraged to make adequate consultation with the course sponsor before registering for the course.

To obtain additional information about reimbursement contact Mr. Matt Rockhold, EGLE, at 517-888-4897.

Questions regarding the above courses may be directed to the Director of Wastewater Education 501(c)(3), Ms. Dendra J. Best, at 231-233-1806.