

## **Basic OWTS Installer Select CEU Subject Matter Criteria**

- Math: volume calculations, tank sizing calculations, retention time calculations, calculate minimum sizing for lagoon systems, calculate minimum sizing for conventional soil absorption systems, and slope and elevation calculations
- Construction Permit Application Forms and Procedures
- Slope/Elevation Measurements
- Soils: interpreting information on soil morphology evaluation reports, recognizing site/soil limitations, understanding suitability for conventional systems, installation procedures that protect the soil resource, surface and groundwater drainage systems/curtain drains, and erosion control/management
- Sewage Pipe Standards and Pipe Bedding Practices
- Excavation Equipment Safety and Use
- Lagoons: construction limitations, construction planning for lagoon systems, site layout for lagoons, and construction methods/equipment
- Sewage Tanks: tank installation requirements, bedding methods for sewage tanks, practices to ensure watertight tank connections and risers, ATU installation, purpose and installation of inlet and outlet devices, types and selection of effluent screens, grease trap tank requirements, and holding tank requirements
- Distribution Methods: gravity distribution, dosed conventional systems and pressure manifold systems
- Conventional Soil Absorption Fields: construction planning for trench systems, site layout for conventional gravity lateral trenches, installation methods for 'pipe and gravel' and other lateral trench products, and landscaping and final grading
- Operation & Maintenance: septic tank pumping requirements, effluent screens, distribution devices, and soil treatment system operation
- Troubleshooting: homeowner use of system (questions/interview), flow rates/metering, infiltration/inflow, soil limitations, surface/subsurface drainage issues, tank function, effluent screens, gravity distribution system function, and soil treatment system function

General CEU subject matter listed below will be accepted for any OWTS professional, but will not satisfy select criteria requirements unless it is listed with Select CEU Subject Matter.

DHSS approved continuing education units meeting any select criteria would also satisfy general CEU requirements

- Health and Safety Topics: pathogens in wastewater, health effects of exposure to wastewater, chemical hazards, confined space hazards, how to protect against health risks, trench safety and related soils issues, physical safety, electrical safety, general first aid, biological hazards and electrical hazards

- OWTS Regulations: Missouri Onsite Laws (DHSS), registration requirements and process, standards of practice, construction permit requirements/exemptions, permit application process, State Minimum Construction Standards (DHSS),
- Local onsite ordinances, water supply well requirements and setbacks, Missouri
- Residential Housing Unit Rule (DNR), land disturbance rules, transportation regulations, utility locate requirements (Missouri One Call), decentralized (OWTS and/or cluster systems) Management (EPA), Clean Water Act related to OWTS and decentralized systems, watershed protection, and groundwater protection
- Procedures for Removing an OWTS from Service
- Plant and Soil Science
- Sustainable Onsite Wastewater Treatment Options
- Water Conservation/Water Management
- OWTS Math