

## EXTENSION and OARDC

### *Agricultural Water Management Systems to Balance Production and Environmental Objectives*

Program Objective: Provide continuing education for land improvement contractors, soil and water conservation technicians, farmers, engineers, consultants, sanitarians, and others interested in advancing their knowledge of basic concepts, principles, and skills related to the purpose, design, layout, construction, and management of Soil and Water Conservation Systems, with emphasis on Water Management and Water Quality.

Instructors include Land-Grant University Faculty/Staff, NRCS/ODNR/SWCD engineers and technicians, ARS engineers and scientists, and experienced OLICA contractors and associates. *Sponsored by: Overholt Drainage Education and Research Program, Food, Agricultural and Biological Engineering, OSU Extension, OARDC, The Ohio State University, in cooperation with USDA-NRCS, USDA-ARS, Soil and Water Conservation Districts, Defiance SWCD, Ohio Land Improvement Contractors and Associates*

*The Overholt Drainage School is funded, in part, by donations to the Overholt Drainage Education and Research Program Endowment at The Ohio State University. You may add a donation to the registration.*

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### ADVANCED REGISTRATION REQUIRED

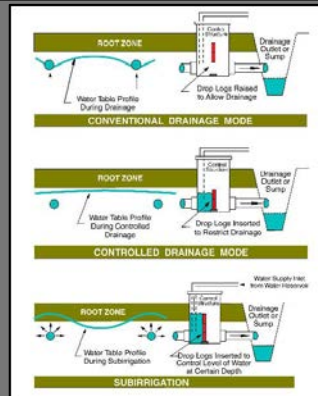
Register for full 5-day program or individual sessions.

Complete registration form and submit with payment by Registration Deadline March 9 (call for availability after March 9).

Registration includes: tuition, lunches, refreshments, materials, supplies, manuals, guides, design notebooks, engineer's scales, certificate of completion, etc., as appropriate for session.

Bring: calculator and pencils. Also, bring warm clothes, boots for possible field trip later in week.

Confirmations, directions, hotel list emailed upon receipt of registration and payment. Partial refund if cancellation by March 9.



### *Drainage School Location:*

**Defiance County EMA Building  
State Route 15, Defiance, Ohio**

**For information, contact Dr. Brown  
brown.59@osu.edu  
1-614-292-3826  
1-614-264-7916 (cell – leave message)**

**Department of Food, Agricultural and  
Biological Engineering  
590 Woody Hayes Drive  
Columbus, OH 43210-1058**

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## EXTENSION and OARDC

### **2015 Overholt Drainage School, March 16-20**

- ▶ ***Agricultural Subsurface Drainage: System Design and Installation***
- ▶ ***Drainage Water Management: Controlled Drainage System Design and Installation***
- ▶ ***Drainage Water Harvesting for Agricultural Water Supply***
- ▶ ***Concepts in Water Table Management with Subirrigation: Aspects of Design, Benefits, Installation, Management***



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# Session Descriptions

## SESSION 1

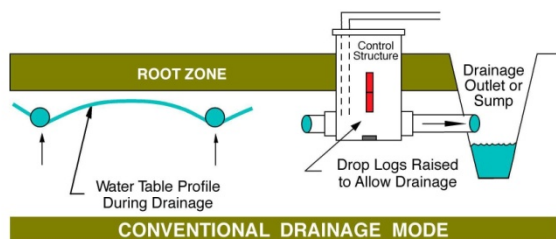
### Agricultural Subsurface Drainage Design, Layout and Installation

March 16-18, 2 ½ days

Monday 9:00 AM to 9:00 PM  
Tuesday 8:00 AM to 9:00 PM  
Wednesday 8:00 AM to Noon+

- Agricultural Drainage Concepts
- Soils Basics
- Drainage Guides
- Subsurface Drainage Design Concepts, Procedures, Sizing Laterals and Mains
- Design Exercises, Work Sessions
- Design Problem for Field Site
- Benefits and Economics of Drainage
- Environmental Impacts and Considerations
- Installation Basics, Methods, Research
- Proper Installation and Common Mistakes
- Other Drainage Design and System Management Concepts

Session 1 - Extensive classroom instruction, day time and evening work sessions and programs. Basic understanding of drainage and elevations encouraged.



**ADVANCED REGISTRATION REQUIRED**  
Register for full 5-day program or individual sessions. Please complete registration form and submit with payment before **March 9**. Call for availability after March 9. Contact Dr. Brown at 1-614-292-3826; or email [brown.59@osu.edu](mailto:brown.59@osu.edu).

## SESSION 2

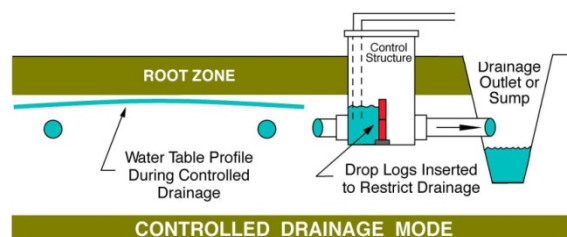
### Drainage Water Management: Controlled Drainage System Purpose, Benefits, Design, Layout and Installation

March 18-19, 1 1/2 days

Wednesday 1:30+ to 9:00 PM  
Thursday 8:00 AM to 9:00 PM

- Concepts/Background
- Issues with Nitrogen and Phosphorus
- Benefits for Water Quality and Crop Yields
- Controlled Drainage Design
- Laterals and Mains
- Design Problems, Layout
- Installation, Operation and Management
- Drainage Collection/Pumping
- Related Practices and Applications
- Drain Spacing/Depth Alternatives
- Outlets, Buffers with Controlled Drainage
- Wood-Chip Bioreactors, Phosphorus Filters
- Drainage Water Harvesting for Agricultural Water Supply

Session 2 - Extensive classroom instruction and presentations, day time and evening work sessions and programs. Completion of a subsurface drainage design educational program is essential for all, but required for contractors.



## SESSION 3

### Concepts in Water Table Management with Subirrigation: Aspects of Benefits, Design, Installation and Management

March 20, 1 day

Friday 9:00 AM to 4:00 PM

- Drainage Water Harvesting for Agricultural Water Supply (continuation as needed)
- Concepts/Background
- System Design Objectives
- Benefits for Water Quality and Crop Yields
- Soil Considerations
- Overview of Water Management Zones, Lateral Spacing, Mains
- Water Considerations
- Irrigation Water Supply and Pumps
- Installation Considerations
- Management and Operation

Session 3 - Classroom instruction and presentations, day time work sessions and programs. Completion of a subsurface drainage design educational program is essential for all, but required for contractors

