

ACES 2014 Afternoon Workshop 3
December 8, 2014 | 1:00pm-4:30pm

Title: *Improving Ecosystem Services from Agricultural Lands: Modern Technology and Markets*

Description:

This workshop will provide both a narrative and hands on opportunities to help participants understand what is Drainage Water Management (DWM), what are the ecosystem services it produces and how can they be entered into the marketplace or other mechanisms to take to scale? Presentations and discussion to include the land requirements for each, suitability requirements, conservation planning as a tool to select, performance of each practice, conservation return on investment of each practice and financial assistance and “gaps” to be closed to advance the implementation of DWM.

Participants will have the opportunity to see the equipment and talk with experts on its operation and utilization.

Agenda:

1. Overview of what DWM is, its potential for application, ecosystem services delivered and potential for broad adoption using incentives and ecosystem service markets (15 minutes) *Alex Echols*, Sand County Foundation
2. USDA assessment of benefits of DWM, financial assistance to agricultural producers and rate of adoption (15 minutes) *Paul Sweeney*, Senior Project Leader NRCS
3. Environmental benefits of DWM and innovations to improve agronomic production and environmental outcomes such as sub surface irrigation (15 minutes) *Rob Sampson*, National Water Management Engineer NRCS
4. Capacity of DWM to provide advanced improvements in water quality by treating pharmaceuticals and pathogens through DWM (15 minutes) *David Lapen*, Research Scientist, Agriculture Canada
5. The Opportunity to Reduce *Municipal Costs for Clean Water by Partnering With Agriculture* (30 minutes) *Dustin Miller*, Iowa League of Cities
6. **Break** – 2:30-3:00pm (30 minutes)
7. Ecological benefits and adoption of swarm technology to improve environmental performance (15 minutes) *Dennis McGrath*, Great Lakes Director The Nature Conservancy
8. Opportunities and obstacles to deliver multiple ecosystem services derived from DWM into the marketplace (15 minutes) *Mike Sprague*, President Trout Headwaters
9. Overview of market potential: What are the key impediments, why is DWM uniquely positioned to move ahead in market deployment, commoditization of ecosystems services, reactions of potential buyers

10. There will be hands on opportunity to handle and see equipment for DWM and discuss this innovative set of practices with leaders in the field who are developing, deploying and utilizing these conservation practices (balance of workshop).

Discussion:

Over 100 million acres of prime farmland in the US have subsurface drainage. While drainage has numerous benefits such as a substantial increase in agricultural productivity and reduces rill erosion and phosphorous loss it can contribute to other unwanted outcomes such as increased loss of nitrogen from agricultural fields. Drainage Water Management (DWM) offers a strategy to reduce nutrient loss (nitrogen and dissolved phosphorous) and deliver significant additional ecosystem services such as reduced flooding, groundwater recharge and sequestering greenhouse gases. DWM includes multiple management practices and have application on over 40 million acres in the US alone.

Target Audience:

- Conservationists interested in improved water quality
- Farmers
- Land managers
- Industry and municipalities interested in lower cost NPDS strategies
- Policymakers interested in advancing cost effective environmental improvements
- Government officials
- Scientists
- Economists

Workshop Organizer:

Alex Echols
Consultant
Sand County Foundation
Alexandria, VA
703/660-2366
echols@conrod.com