

**Association of State Wetland Managers
Soils Training Webinar Series
Webinar #4**

**Using Field Observations of
Soils Onsite in Decision Making**

October 12, 2016

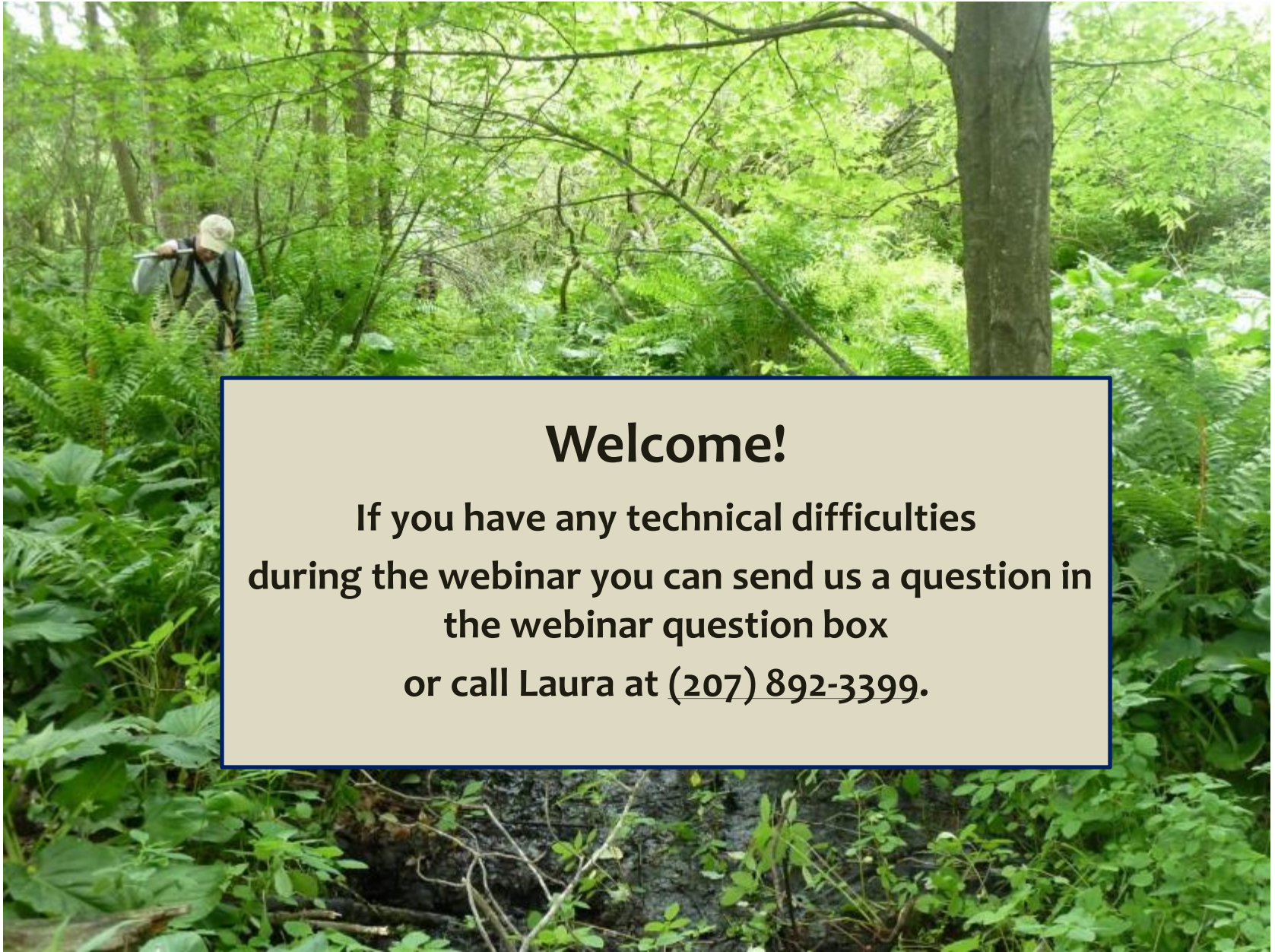
3:00 - 5:00 pm Eastern

Training Presenters

John Galbraith, Virginia Tech

W. Lee Daniels, Virginia Tech

Bruce Vasilas, University of Delaware



Welcome!

If you have any technical difficulties during the webinar you can send us a question in the webinar question box or call Laura at (207) 892-3399.

Some Tech Guidance for Today's Webinar

If you are using the telephone to listen to the webinar, please mute both your computer's microphone and speakers



To ensure GoToWebinar runs as smoothly as possible, please close any programs you are not using

In case of audio issues:

Have the .pdf document we sent you prior to the webinar ready to follow; you can still call-in using the telephone using the number and access code

A screenshot of the GoToWebinar interface. The 'Questions' panel is highlighted with a blue circle. Below it, there is a table with columns 'Question' and 'Asker'. There are also buttons for 'Send Privately' and 'Send to All'. At the bottom, there is a 'Chat' panel with a text input field labeled '[Type message here]'. A blue arrow points from the text below to the 'Send to All' button.

X	Question	Asker

Please submit your questions for the presenters via the question box.

Training Webinar Agenda

Welcome

(5 minutes)

Introduction of ASWM Training Pilot and Voluntary Online Quiz

(5 minutes)

Trainer Introductions

(5 minutes)

Three Training Presentations

(~75 minutes combined)

Q&A

(30 minutes)



Introductory Remarks from
Jeanne Christie, ASWM Executive Director
Today's Webinar Moderator



ASWM Wetland Training

A Work in Progress



- Working with a national project workgroup to help guide ASWM efforts
- Hydric soils training in response to ASWM needs assessment and restoration project findings
- Our grant is allowing us to pilot different training types, methods, tools and techniques
- Working to find the best methods and tools to deliver trainings
- Online training pilot
- Lots of considerations and learning as we go
- We welcome feedback!





Recap of Webinars to Date & ASWM Hydric Soils Training Next Steps

Content Already Covered

Webinar #1: Basics of Hydric Soils

July 13, 2016

Topics: Soil formation, horizonation versus simple processes, soil texture and structure and soil color

Webinar #2: Hydric Soil Processes

August 10, 2016

Topics: Redox reactions and redoximorphic features, hydric soils functions, The Hydric Soil Technical Standard

Hydric Soils Training Webinar #3: Landforms and Landscapes

September 14, 2016

Topics: 1) landscape and hydric soils, 2) problematic landscapes and parent materials, and 3) HGM and hydric soils.

Since the Webinar

- Sent out certificates of participation to all who requested for Webinars #1-3
- Tried out several different quiz mechanisms; piloting new tool Class Marker

Under Construction: ASWM Online Training Modules



- Post-processing webinars into online training modules available for anytime/anywhere access
- *Individual Online Module = Intro + One Presentation + Quiz*
- Qualified for documentation of participation (for use in obtaining CEUs)
- Free for ASWM Members, fee for certificates only for non-Members starting January 1, 2017

Hydric Soils Training Webinar #4



PURPOSE

Based on ASWM project training needs assessment, data from ASWM's recent studies and wetland restoration project findings

Soil Webinar Series has been designed to:

- Meet a clear training need for on-the-ground wetland professionals
- Deliver high quality soils training

Voluntary Quiz ← Asking all participants to take the quiz

- To evaluate the quality of ASWM training
- To inform ASWM's larger initiative to improve access to high quality wetland training
- To identify participants who wish to receive *documentation of attendance* in the webinar

IMPORTANT

To receive documentation of webinar attendance (for CEUs), you must:
1) participate in the live webinar presentation and 2) complete the electronic quiz.

Webinar #4 Learning Objectives

Using Field Observations of Soils Onsite in Decision Making

By taking part in this training webinar, participants should be able to:

Better understand how to use field observations of soils onsite in decision making, specifically...

- How to use field indicators of hydric soils in the United States
- Hydric soils as they relate to mitigation, voluntary restoration and creation, and
- How to use field indicators to assess long-term hydrology



On-the-Ground Training Recommended

in addition to ASWM Webinars/Online Modules



Jeanne Christie Photo

- Soils training needs a field component
- Learning basics today about hydric soils processes that can be taught remotely
- ASWM encourages you to participate in field training
- ASWM has been working with our hydric soils training team to draft field training guidance
- Find a local/state/regional entity that can host field training

What's On the Voluntary Quiz?



You will take the quiz on an electronic site *called* Class Marker.

We welcome feedback on its functionality and user-friendliness.

- **Basic Information**

- First and last name
- Email address
- Certify you participated in the live webinar

- **Knowledge Questions**

- Nine soils training questions (three per webinar section)

Quiz takes
~10 minutes
to complete

The quiz will be available for 30 days.

How to Access the Online Quiz

**A link to the electronic quiz will be provided
at the end of the webinar, before the Q&A Session**

Your Options

Option A: Click on the hyperlink provided in the webinar “Comment Box”

Option B: Use the hyperlink that will be sent in follow-up GoToWebinar email

If you cannot access the Class Marker site...

Option C: You may request a PDF copy of the quiz to be emailed to you
(with directions) by contacting Laura Burchill at laura@aswm.org

Documentation of Participation



ASWM | 32 Tandberg Trail Suite 2A, Windham, ME 04092 www.aswm.org

If you both participate in the live webinar broadcast and complete the online quiz...

You will receive a certificate of participation at the email address you entered on the quiz.

Documentation will be sent immediately following completion of the quiz

You must submit documentation yourself to accrediting agency for CEUs

If you have multiple people viewing the webinar using one web link, contact Laura@aswm.org to request ASWM's webinar multi-viewer form.

How to Access Information about ASWM Soils Training Webinars and Online Modules

www.aswm.org

Online Modules will be posted on ASWM Soils Page when ready for use

Online modules developed from Webinars are planned to be available by the end of the calendar year.

The screenshot shows the ASWM website with the following elements:

- Header:** Association of State Wetland Managers - Protecting the Nation's Wetlands.
- Navigation Menu:** Home, ASWM, I Am..., Wetlands, **Soils** (circled), Wetland Programs, Watersheds, Law, News & Jobs, Blog.
- Main Menu:** Join/Renew, Contact Us, News, Webinars, ASWM Publications, Wetlands One-Stop Mapping, Donate, Volunteer.
- Member's Login:** Username, Password, Remember Me, Log In, Create an account, Forgot your username?, Forgot your password?
- Science Menu:** Wetland Science, Wetlands One-Stop, Monitoring & Assessment, National Wetland Condition Assessment (NWCA), Indicators, Wetland Restoration, Planning & Design, Ecosystem Service Valuation, Restoration Costs, Hydrology, Soils, Plants, Monitoring & Performance Standards, Adaptive Management, Invasive Species, Wetlands & Climate Change, Sea Level Rise, Carbon Sequestration, Natural & Green Infrastructure, Climate Change Adaptation, Climate Change Mitigation, Climate Change Publications, Other Resources.
- Soils Page Content:**
 - Soils** (circled)
 - Text: "All wetlands exist on a substrate of soil, and most have water sources that are affected by movement through adjacent soils. The movement of water through the soil medium, the ability of the soil to store surface and/or groundwater, and the ability of the soil to perform biogeochemical processes is critical to wetland function. In a large sense, differences in wetland types correlate to differences in soil types. For instance, the presence of an intact perching layer may preclude the ability of a particular wetland to store ground water but allow for greater surface water storage. In many cases, a lack of understanding of soil hydrodynamics leads to unexpected outcomes." (circled)
 - Text: "Failure to fully assess and plan for soils (avoiding compaction, identifying the need for soil amendments, detecting deep impervious or perched layers) can also lead to poor outcomes. While desktop screening for hydric soils, or soils with hydric indicators, is a necessary first step, typically actual sampling including test pits should be conducted to better assess site suitability for wetland restoration and identify potential risks. Excessive excavation and grading activities can significantly disrupt soil profiles. Soil type, treatment, and condition can be a big determinant of success or failure. This can render the top soil layer deficient in organic matter and nutrients that are essential to establishing a healthy plant community. Large scale disturbance to the soil also facilitates the establishment of invasive species and can result in a monoculture of undesirable vegetation." (circled)
 - Text: "In some locations, soils also need to be evaluated for the presence of toxics and/or pesticides and risks need to be carefully evaluated. For example, the restoration of pre-existing marshland around Lake Apopka in Florida in the late nineties resulted in a massive bird die-off. When the land was purchased, it was known that it included an unknown quantity of old pesticides that might pose a risk to wildlife. Twenty thousand tons of contaminated soils were removed. However, the environmental risk assessment indicated that some pesticides still remained, including DDT and its metabolites, which were of concern to piscivorous birds. The old farm fields in the North Shore were flooded anyway and the subsequent arrival of birds was seen as a "success." More than 1,000 birds perished, not including the subsequent deaths after migration and due to reproductive damages. The birds were poisoned when they ate fish on former farmlands north of Lake Apopka that had been flooded with lake water (Industrial Economics, 2004)." (circled)
 - Association of State Wetland Managers Soils Training Webinar Series** (circled)
 - The Association of State Wetland Managers is launching a series of training webinars on hydric soils for wetland professionals and more specifically state and tribal wetland field staff (plus state/tribal wetland managers, local municipal officials, conservation commissions, boards of health and others).
 - This four-part training series is for wetland field practitioners who have expertise in hydric soils and seek to understand how hydric soils are formed and how to recognize and interpret the information they provide when observed in the field. This can also be used as a refresher course for those who have not had soils training in recent years.
 - This soils training webinar series is being developed as part of the EPA Wetlands Program Development Grant-funded project to develop and deliver high quality, on-the-ground wetland professionals.
 - Each webinar in this soils training series will be accompanied by a short quiz at the end to assess whether participants understand the key concepts of the training. While taking the quiz is voluntary, to receive CEUs for this course (for this soils training webinar series only), participants must complete the assessment quiz. Regardless of whether you seek CEU documentation or not, we hope all participants will complete the quiz at the end of each webinar to help us assess the effectiveness of the presentations and the training series for our audience.
 - ASWM HYDRIC SOILS TRAINING SERIES WEBINAR #1** (circled)
 - Association of State Wetland Managers Soils Training Webinar #1 of 4: Basics of Hydric Soils
 - July 13, 2018 at 3 pm Eastern
 - Register Now

Today's Trainers



John Galbraith
Associate Professor
of Crop and Soil
Environmental Sciences,
Virginia Tech



Lee Daniels
Professor of
Environmental
Soil Science
Virginia Tech
Blacksburg, Virginia



Bruce Vasilas
Professor of Agronomy
and Soil Management,
Plant and Soil Sciences
Department,
University of Delaware

Handing Over Controls to Today's First Trainer



The profile on the right is from a drained wetland adjacent to a ditch. The profile on the left is from an area not affected by the ditch. Both soils meet the requirements for indicators F3 (Depleted Matrix) and A11 (Depleted Below Dark Surface) and thus are hydric soils.

Photo and Caption Source: NRCS Field Indicators of Hydric Soils, Version 7.0, 2010