

Agenda

Complying with Illinois Laws and Regulations Illinois Department of Natural Resources: Clean Water Act/wetlands permitting Complying with Endangered Species Act	<i>N. Grider</i>
Surface Water Behavior Flow measurement Historical records Hydraulics and hydrology modeling methods Understanding human impacts Causes of stream degradation	<i>G. Nail</i>
Stream Restoration Considerations Vegetation Aquatic habitat Wildlife habitat Impact of livestock and agriculture Human interaction	<i>T. Girolamo</i>
Stream Restoration Planning Site investigation and assessment Channel design Channel geometry Sediment impact	<i>M. Melchior</i>
Streambank Stabilization Techniques Stream barbs Vanes Weirs Spur dikes Bioengineering Toe wood Log jams Rock walls Riprap Bed stabilization	<i>M. Melchior</i>
Case Study: Middleton's Pheasant Branch Past, Present, and Future Historical wetlands and land use changes Present flood damage and assessments Future efforts to enhance habitat quality	<i>A. Steber</i>

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Stream Restoration in Illinois

Live, Interactive Webinar - Tuesday, July 27, 2021

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Learning Objectives

- You'll be able to:**
- Comply** with Clean Water Act regulations and permitting requirements of the Illinois Department of Natural Resources.
 - Study** surface water hydraulics and hydrology.
 - Consider** the impacts of livestock and agriculture on stream health.
 - Explore** channel design and sediment impact.
 - Evaluate** streambank stabilization techniques, including stream barbs, spur dikes, bioengineering and log jams.
 - Learn** about restoration practices in use on the Pheasant Branch Stream in south central Wisconsin.



HalfMoon Education Online Learning Stream Restoration in Illinois

Live, Interactive Webinar - Tuesday, July 27, 2021



- Comply** with Illinois laws and regulations and the federal Clean Water Act
- Study** surface water behavior
- Consider** vegetation and habitat when undertaking restoration
- Explore** channel design and channel geometry
- Discuss** stabilization techniques, including vanes and weirs
- Examine** the restoration of Middleton's Pheasant Branch Creek

Continuing Education Credits

- | | |
|---|---|
| Professional Engineers
6.5 PDHs | Landscape Architects
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| Architects
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Faculty

Nathan Grider *Manager, Impact Assessment Section Illinois Dept. of Natural Resources*
Mr. Grider serves as the Manager of Consultation Services for the Illinois Department of Natural Resources (IDNR). He has worked for IDNR in fish and wildlife management for over eight years with diverse training from positions held in the Office of Mines and Minerals, Division of Fisheries, and over five years in Consultation Services. Mr. Grider has extensive knowledge on fish and wildlife species that occur in the state, particularly state-listed species, and specializes in conducting environmental impact reviews on construction and maintenance projects throughout the state. He works closely with project leaders to ensure compliance with the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and other applicable natural resource regulations while coordinating with federal, state, and local governments, and responding to public concerns. He holds a master of science degree in Biology with a minor in Environmental Science from the University of Illinois, Springfield.

Dr. Gregory H. Nail, PHD, PE *Associate Professor, University of Tennessee at Martin*
Dr. Nail is an associate professor in the Engineering Department at the University of Tennessee at Martin where he teaches a variety of courses including fluid mechanics, hydraulics and hydrology, and hydraulic and hydrologic modeling. He holds a professional engineer's license based on having passed both the Civil and Mechanical discipline-specific exams. Prior to coming to UT-Martin in 2002 he worked as a research hydraulic engineer for the United States Army Corp of Engineers for 11 years. He is a former member of the Executive Committee of the Tennessee American Water Resources Association, and he has lectured on various HEC-RAS modeling topics at the Annual Tennessee Water Resources Symposium and at other venues. Dr. Nail earned his B.M.E. degree from Auburn University and his M.S. and Ph.D. degrees from Texas A&M University.

Tom Girolamo *Eco-Building & Forestry*
Mr. Girolamo is founder of Eco-Building & Forestry, LLC. The company provides sustainable property design, installation and maintenance. He has developed unique processes of assessing natural resources and managing the interactions of people with their environment. Mr. Girolamo's goal is that every project produces benefits for the owner/users of the property, prosperity for the community and abundance for the planet. He is a graduate of University of Wisconsin- Stevens Point, B.S. Degree

in Forestry with emphasis in Forest Management and Urban Forestry. He also earned a Certificate in Permaculture Design from the Permaculture Research Institute-Australia. Mr. Girolamo is the published author of *Your Eco-Friendly Yard-Sustainable Ideas to Save You Time, Money and the Earth*. He and his wife live on seven acres of land in central Wisconsin known as the Sustainable Landscape Center. Their property includes outdoor brick ovens, unique vegetation, a plant nursery and a flock of weed-eating chickens.

Marty Melchior *Principal Ecologist at Inter-Fluve*
Mr. Melchior has 24 years of professional experience in salmonid and warm water fish habitat restoration, fluvial geomorphology and biotic assessment, natural channel design, and watershed management. His specialty expertise includes dam removal design, natural channel design, forensic fluvial geomorphology, urban channel restoration, and large woody debris dynamics. He has pioneered the science and design of retired cranberry bog wetland systems. Mr. Melchior is a regular instructor for the stream restoration and dam removal at the University of Wisconsin, University of Minnesota/NCED, and Harvard University, and teaches engineered large wood design for the US Forest Service. Mr. Melchior is also a certified fisheries professional with the American Fisheries Society.

Aaron Steber *Senior Consultant at Cardno*
Mr. Aaron Steber is a stream restoration specialist managing streambank/shoreline stabilization and habitat enhancement projects including project planning, design, grant administration, permitting, and construction oversight. He has more than 21 years of experience working with streams located in Wisconsin, Minnesota, Illinois, Iowa, Michigan, Ohio, Colorado, Montana and Idaho, as well as internationally in Finland and Costa Rica. Mr. Steber conducts geomorphic surveys to review channel morphology/stability, and works with computer modeling software to assess the most effective methods of managing available water resources in designated areas. He also provides design and construction oversight for aquatic organism passage, stormwater and water quality improvement projects, in addition to wetland, watershed and lake studies. Prior to joining Cardno, Mr. Steber was the state forest hydrologist for the Idaho Department of Lands (IDL). While working for IDL, Mr. Steber provided technical solutions to a variety of water resource issues including: stream crossings, stream restoration, erosion control, wetlands, forest-practices, mining, landslides, groundwater availability and endangered species for more than 800,000 acres of actively managed forests.

Webinar Information

Log into Webinar 8:00 - 8:30 am CDT	Break 12:00 - 1:00 pm CDT
Morning Session 8:30 am - 12:00 pm CDT	Afternoon Session 1:00 - 4:30 pm CDT

Tuition
\$289 for individual registration
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Continuing Education Credit Information
This webinar offers 6.5 PDHs to professional engineers and 6.5 HSW continuing education hours to architects licensed in Illinois. It also offers 6.5 HSW continuing education landscape architects licensed in Illinois.

This course has been approved by the American Institute of Architects Continuing Education System for 6.5 LU|HSW (Sponsor No. J885) and the Landscape Architecture Continuing Education System for 6.5 HSW PDHs. Only full participation is reportable to the AIA/CES and LA CES.

This course is registered with the American Planner Association AICP for CM|6.5 for Certified Planners (Course No. 9216557).

The Association of State Floodplain Managers has approved this course for 6.5 CECs.

Completion certificates will be awarded to participants who complete this event, respond to prompts, and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

Registration

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Complete the entire form. Attach duplicates if necessary.		Email: _____
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