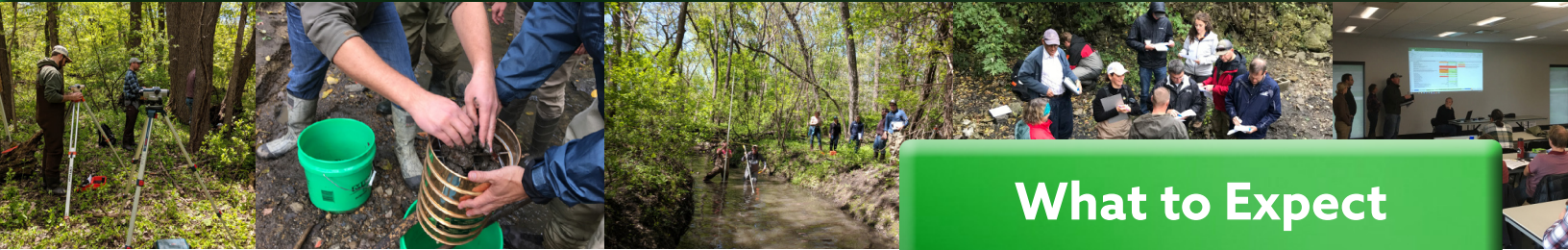


# Iowa's River Restoration Toolbox

## Level 1/Base Training

**2023**  
**June 12th - 15th**

**Wanatee Park Prairie Oak Lodge**  
**4201 Big Bluestem Dr.**  
**Marion, IA 52302**



### Course Details

Learn about streambank stabilization and restoration techniques from national and Iowa experts and how to use the IDNR River Restoration Toolbox to restore stream functions.

### Featured Speaker: George Athanasakes

George is the Ecosystem Restoration Program Leader for Stantec, and has more than 25 years of experience working on innovative stream restoration projects nationwide. George has taught at numerous restoration workshops, and worked with the IDNR river restoration planning team to create Iowa's River Restoration Toolbox. Additional instructors will supplement George's presentations.

### Who should attend?

Those that design, review plans and oversee site construction. This includes design professionals-engineers and landscape architects, biologists, ecologists, project managers, city and county staff, WMA coordinators, natural resources specialists, urban conservationists, university faculty, floodplain managers, environmental professionals in Iowa and other interested professionals.

### What to Expect

- Four days of field and classroom team-based training in the latest stream assessment and restoration practices conducted by restoration experts
- Listed on IRR website as having completed the training requirements
- Level 1 Certificate of Completion provided, can be used for PDHs
- Eligibility to participate in Level 2 Advanced Training
- Lunch and beverages provided
- Course Fees: Early bird fee now until April 15 \$700, regular fee before May 1 \$750, Late fee after May 1 \$850

**Register Today!**

[www.iowaRivers.org](http://www.iowaRivers.org)



**Questions?**

Email

[info@iowarivers.org](mailto:info@iowarivers.org)

## What to Bring and Wear?

**Plan on clothing and foot attire for muddy and wet conditions. Hip waders or tall rain boots will be needed. Please bring extra footwear for the classroom. Bring PPE including vests and hardhats. Also bring a laptop, several pencils, and a clipboard. Please also view basic surveying [www.youtube.com/watch?v+tNRZPHLwC7k](http://www.youtube.com/watch?v+tNRZPHLwC7k)**

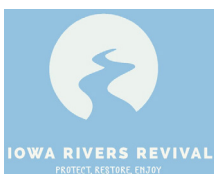
## About the IDNR River Restoration Toolbox

The Toolbox was developed by a national expert for the Iowa Department of Natural Resources to assist Iowa designers and reviewers of stream stabilization and restoration projects by providing proven natural techniques that incorporate materials, such as logs, rocks, and live plantings. These methods provide multiple benefits while remaining the most cost-effective options.

The goal of this resource is to assist design teams with the evaluation of streams and the selection of suitable practices that will result in successful projects. Just as important, the Toolbox will help prevent the installation of practices that are unsuccessful and destructive to the stability of river ecosystem.

It will help you understand the driving factors that cause an unstable stream segment to erode or damage infrastructure prior to jumping to solutions, which leads to long-term stable, economically beneficial solutions. It takes the user through the major steps of stream assessment, including field-collected stream survey data, key stream stability issues, and multiple practices and techniques that are appropriate for the type of restoration project.

Included with the Toolbox is an assessment method and reviewable design checklists to aid in decision making among multidisciplinary teams (i.e. – funding partners, designers, project managers, and contractors etc.). It also provides detailed design guidance, drawings and specification requirements to assist with project bidding.



**Questions?**  
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### Monday, June 12th

#### Introduction to River Restoration Toolbox

- 8:00am - 8:30am** Module 1: Welcome & Course Overview – Nate H.
- 8:30am - 9:00am** Module 2: What Causes Stream Instability – Noah T.
- 9:00am - 9:30am** Module 3: What is a Healthy Stream? How to ID & Evaluate Stream Function – George A.
- 9:30am - 10:00am** Module 4: Basic Hydrologic/Hydraulic Calculations & Impact of Urbanization – George A.
- 10:00am - 10:15am** Break
- 10:15am - 11:15am** Module 5: Morphology, Facets, Ratios & Stream Classification – Nate H.
- 11:15am - 11:45am** Module 6: Field Methods to Determine/Verify Bankfull Elev., XS Area & Discharge – George A.
- 11:45am - 12:00pm** Module 7: Field Exercise 1 – Forms and Procedures – Nate H. & George A.
- 12:00pm - 12:30pm** Lunch
- 12:30pm - 4:30pm** **Field Team Exercise #1:** Outdoor streams survey and assess bankfull elevation, XS area and discharge on designated stream reach. Teams then return to classroom to plot data and classify the stream reach.

### Tuesday, June 13th

- 8:00am - 8:30am** River Restoration Policy & Progress Discussion, the Iowa Mitigation Method – Luke H.
- 8:30am - 10:30am** Teams Finalize Exercise 1 Presentations – Teams
- 10:30am - 10:45am** Break
- 10:45am - 11:30am** Teams Present Findings – Exercise 1 – Teams
- 11:30am - 12:00pm** Module 8: Channel Evolution Implications & Drivers of Instabilities – George A.
- 12:00pm - 12:30pm** Lunch
- 12:30pm - 1:00pm** Module 9: BANCS Model – Nate H.
- 1:00pm - 1:15pm** Module 10: Review of Field Day 2 Data Collection – Nate H. & George A.
- 1:15pm - 4:30pm** **Field Team Exercise #2:** Assess stream stability, banks survey, bank profile, and enter data.

# Level 1/Base Training Agenda

## Wednesday, June 14th

- 8:00am - 9:00am** Module 11: Vegetation Establishment, Erosion-Sediment Control & Pollution Prevention – Noah T.
- 9:00am - 9:30am** Module 12: Data Entry into the River Restoration Toolbox – George A.
- 9:30am - 11:00am** Teams Enter Data & Finalize Presentations - Teams
- 11:00am - 12:00pm** Teams Present Findings on Stability & Bank Assessments - Teams
- 12:00pm - 12:30pm** Lunch
- 12:30pm - 1:30pm** Module 13: Understanding the Key Instability Drivers to Inform Design/Decision Matrix – George A.
- 1:30pm - 3:00pm** Module 14: Overview of Practices – George A.
- 3:00pm - 3:15pm** Break
- 3:15pm - 4:30pm** Group Discuss Appropriate Practices - Teams

## Thursday, June 15th

- 8:00am - 9:00am** Module 15: Joint Permit Applications in Iowa & Iowa's Stream Mitigation Method – Nate H.
- 9:00am - 9:45am** Review Teams River Restoration Toolbox & Discuss Appropriate Practices - Group
- 9:45am - 10:15am** Module 16: Overview of Geomorphic Channel Design & Preview of Level II Course – George A.
- 10:15am - 10:30am** Break
- 10:30am - 12:30pm** Module 17: Keeping Parameters within Functioning Range & Real World Case Studies - Nate H. & George A.
- 12:30pm - 1:00pm** Lunch
- 1:00pm - 2:30pm** Site Visit to Local Restoration Reaches



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