Iowa's River Restoration Toolbox
Level 1/Base Training

2021
September 7th - 10th

Kennedy Park
1415 Nelson Ave
Fort Dodge, IA 50501

What to Expect

• Four days of team-based training in the latest stream assessment and restoration practices conducted by restoration experts, lunch included during field days

• Level 1 Certificate of Completion

• Listed on IRR and ISWEP websites as having completed the training requirements

• Eligibility to participate in Level 2 Advanced Training

• Professional Development Hours (PDHs)

• Course Fee: Register now until August 17 for $600, after August 17 $650

Course Details

Learn about streambank stabilization and restoration techniques from Iowa experts and how to use the new IDNR Toolbox to restore stream functions. Based on current CDC guidance related to COVID-19, this training will be held in-person. Masks or face coverings are optional. A hybrid of in-person and virtual learning may be adopted if CDC recommendations change.

Featured Speaker: George Athanasakes

George is the Ecosystem Restoration Program Leader for Stantec, and has 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?

Design professionals including engineers and landscape architects, biologists, ecologists, project managers, WMA coordinators, natural resources specialists, urban conservationists, university faculty, floodplain managers, environmental professionals in Iowa and other interested professionals.

Register Today!
www.IowaRivers.org

Questions?

Email
info@iowarivers.org

Defining the Iowa River Restoration Toolbox

The Toolbox was developed by the Iowa Department of Natural Resources to assist Iowa designers and reviewers of stream stabilization and restoration projects by providing proven techniques that incorporate natural materials, such as logs, rocks, and live plantings. Among the many techniques included in the Toolbox are: longitudinal peaked stone toe protection, j-hook vanes, rock arch rapids, oxbows, riparian corridor restorations, and tree/shrub plantings. Included are 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.). The Toolbox also provides detailed design guidance, drawings and specification requirements to assist with project bidding.

Toolbox Development

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 prevent the installation of practices that are unsuccessful and destructive to the stability of river ecosystem. A national expert in the design and installation of these practices was hired to research and merge common engineering and restoration practices into useful assessment and design guidance. It was then reviewed and adapted by a statewide team of Iowa engineering, river restoration, project management, and aquatic habitat professionals from various cities, state agencies, federal, and non-governmental organizations with a stake in its development. Efficiencies are anticipated with the use of the Toolbox from inception to permitting, because reviewers can work from generally accepted design assumptions and calculations to support the selected practices.

Why Use the Toolbox?

This resource focuses on natural techniques in streambank stabilization and stream restoration that provide multiple benefits while remaining the most cost-effective options. The Toolbox 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. The Iowa DNR State Revolving Fund (SRF) Sponsored Project Program will be requiring its applicants to use the Toolbox to be eligible for the Clean Water Loan Program. Through this program, wastewater utilities can finance and pay for projects, within or outside the corporate limits, that cover best management practices for nonpoint source pollution control.

What Should I Wear?

Plan on clothing and foot attire for muddy and wet conditions. Hip waders or long rain boots will be needed. Please bring extra footwear for the classroom. Bring several pencils and a clipboard. Bring a laptop. Please also view basic surveying www.youtube.com/watch?v+tNRZPHLwC7k

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Tuesday, September 7th

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 – Pat S.
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.

Wednesday, September 8th

8:00am - 8:30am	River Restoration Policy & Progress Discussion, the Iowa Mitigation Method – Sara C.
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

8:00am - 9:00am	Module 11: Vegetation Establishment, Erosion-Sediment Control & Pollution Prevention – Pat S.
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

Friday, September 10ᵗʰ

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

Questions?

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info@iowarivers.org