

New advanced
workshop in
Sept. 2019

2019 River Science Series- new restoration workshop

Special workshop offering in 2019

Due to the degree of interest in stream restoration design and application methodologies and the limitations in instructor and attendees time and availability, we have decided to offer a condensed 5-day version of two advanced workshops - **River Restoration: Design & Application** and **Restoration Solutions in Fragmented River Ecosystems**. This new workshop titled **Restoring River Ecosystems: Design & Application** will be held September 9-13, 2019 in Luverne, MN. This location was chosen to utilize an active channel restoration and dam removal project in Blue Mounds State Park as a case example and practical exercise.



A channel restoration and dam modification on the Zumbro River in Oronoco, MN.



Restoring River Ecosystems: Design & Application

Prerequisites: MN DNR Fundamentals of River Science (or earlier version) or comparable professional training/experience. (Please contact us if you have questions about your eligibility.)

Expected knowledge and experience: understanding of critical geomorphic and ecological processes, stream stability, a familiarity with Rosgen's stream classification, identifying and surveying bankfull channel and floodplain geometry (dimension, pattern, and profile), sediment transport and hydraulic measurements and calculations.

This course will incorporate principles, methods, and tools for holistic stream restoration using natural materials and designs, with an emphasis on re-establishing both geomorphic and ecological processes. Fundamentals of restoration design that will be explained include: 1) diagnosis of underlying problems, 2) incorporation of local reference morphology, geomorphic and ecological processes, and 3) project design and construction techniques. Project types discussed will include re-meandering straightened/ditched channels, dam removal, channel restoration following removal of dams with sediment laden reservoirs, dam conversion to a rapids, fish bypass channels around dams, culvert replacement/remediation, and bank stabilization. In addition to classroom lectures and field observations, students will design a restoration project utilizing collected and provided field data. Students will also test designs in a laboratory stream model. With this course, students will develop their foundation for work in this field that with ongoing fieldwork, project experience and interdisciplinary collaboration will lead to effective stream restoration.

September 9-13, 2019. Luverne, MN. \$1,000.

River Science Series

- The Fundamentals of River Science: Applied Geomorphology & Ecology
- River Monitoring & Assessment
- River Restoration: Design & Application
- Restoration Solutions in Fragmented River Ecosystems

2019 MN DNR REU Workshop Registration Form

Registering for:

Price

Restoring River Ecosystems: Design & Application

September 9 - 13 in Luverne, MN

\$1,000

Registrant Information:

First & Last Name

Title/Position

Organization/Agency

Street Address

City, State, Zip

Daytime phone

E-mail address

Food allergy or dietary need

Payment information

➡ Payment is due with registration.

➡ MN DNR staff or other state agencies can pay by purchase order. For all others, checks should be made out to 'MN DNR'.
(Sorry, we can not accept credit cards.)

- Check is enclosed (make payable to **MN DNR**)
- Will provide purchase order (if MN state agency)
- If payment is not included explain when payment will be made.

➡ Registrations will be handled on a first come/first served basis; class size will be limited to 40 students.

➡ Cancellation after registering will result in a \$100 penalty. Cancellations less than two weeks prior to the first day of the workshop will result in forfeit of the registration fee or use towards the next time the workshop is offered.

➡ Class cancellations due to low enrollment will be determined two weeks prior to the start date.

Mail or fax registration to:

MN DNR, Attn. [Carla Koski](mailto:Carla.Koski@state.mn.us)
1509 First Avenue North
Fergus Falls, MN 56537
Phone (218) 739-7576 ext. 227
Fax (218) 739-7601
Carla.Koski@state.mn.us

E-mails will be sent to confirm registration and to provide workshop information as the workshop date approaches.

For workshop questions or to express interest, contact:

[Amy Childers](mailto:Amy.Childers@state.mn.us)
MN DNR - River Ecology Unit
Phone: 218-739-7576 ext. 233
Amy.R.Childers@state.mn.us

Refreshments and snacks are provided throughout each workshop. Lunches are provided during full days. Suppers are provided when fieldwork and data analysis continues into the evening.

Lodging is not included with registration. Information on local options will be provided.