

Stream Health and Restoration Workshops 2006

Fluvial Geomorphology and
Stream Classification
17-21 July, Fergus Falls, MN

Stream Assessment and Monitoring
21-25 August, Whitewater State Park
Altura, MN

As rivers become more widely recognized and appreciated as valuable natural resources, the responsibility to better understand these systems takes on greater importance. The Minnesota Department of Natural Resources offers workshops that teach the basic functions and processes of rivers, the Rosgen method of stream classification, assessing and monitoring river health, and natural channel design river restoration. These workshops are designed for natural resource professionals whose work involves rivers directly or indirectly as well as those who are engaged in watershed-wide resource management issues.



What We Offer

We offer a series of three stream-related workshops. The first course, Fluvial Geomorphology and Stream Classification, is a prerequisite for the subsequent courses. This workshop is typically offered once a year. The second (Stream Assessment and Monitoring) and third (Stream Restoration) workshops are offered in alternating years. All courses include both classroom lectures and field exercises, and all run from mid-day Monday through mid-day Friday.



Fluvial Geomorphology and Stream Classification

Rivers and streams have predictable dimensions, patterns, and profiles. This course discusses the fluvial geomorphological processes involved in creating and maintaining these parameters, as well as the fundamental hydrology and hydraulics of rivers. We also focus on the skills necessary to properly determine a stream segment's type, including the essential tools for classifying streams to Levels 1 and 2 using the Rosgen classification methodology.

Upon completion of this course, students will have the skills necessary to classify a stream reach, greatly facilitating communications among river managers worldwide. Students will also have a firm knowledge of the functions and processes that are critical to a river's health.

This class will be held in Fergus Falls, Minnesota this year, 17-21 July.

Stream Assessment and Monitoring

This workshop is designed to teach natural resource professionals to effectively determine a stream's health, or condition, and to monitor it over time. Concepts taught include sediment transport, causes and rates of erosion, use of biological indicators, and understanding riparian vegetation. Techniques used include surveying, Pfankuch's Stability Rating, biological sampling, Bank Erosion Hazard Index, suspended and bedload sediment sampling, and various channel monitoring techniques including bank pins and bed chains.

Students completing this course will be able to quantitatively describe a river's condition in terms that other professionals can understand. These skills also enable a researcher to monitor a river's condition over time in a non-subjective manner.

This class will be held 21-25 August at Whitewater State Park.



Stream Restoration

This workshop is designed to teach natural resource staff to plan and construct stream improvements and restorations using natural materials and designs, while working with the river's natural processes rather than against them. Project types discussed will include bank stabilization, dam removal, dam conversion to a rapids, culvert placement, restoration of meanders to straightened channels, and fish bypass channels around dams. In addition to classroom lectures and field observations, students will design and construct a restoration project on a laboratory stream model.

After completing this course, students will be able to work with other professionals to design and implement stream improvement projects on the ground from beginning to end, using a natural stream approach.

This class will not be offered in 2006.



Instructors

Dr. Luther Aadland. Luther is the Program Consultant for the Minnesota Department of Natural Resources' Stream Habitat Program. He earned his doctorate from University of North Dakota in 1987. His work and research have included a wide variety of topics related to stream health, habitat, geomorphology, and ecology. He has developed designs for numerous channel restoration, fish habitat, fish passage, flood damage reduction, dam removal, and bank stabilization projects.

Ian Chisholm. Ian is the Program Supervisor of the Minnesota Department of Natural Resources' Stream Habitat Program. He earned his masters degree in Fisheries Science from the University of Wyoming in 1985. Ian has worked extensively to incorporate science and ecological principles into freshwater management, at every level, from field data collection to policy and management philosophy.

Dr. Sandy Verry. Since recently retiring as the Chief Forest Hydrologist with the U.S. Forest Service North Central Research Station in Grand Rapids, MN, Sandy has started the Ellen River Partners consulting firm. Sandy earned his masters degree from the University of Illinois and his doctorate from Colorado State University in 1983. He is an expert in hydrology and nutrient cycling, with a focus on the peatlands and bogs of northern Minnesota. Sandy has also studied culvert placement extensively.

Kevin Zytovicz. Kevin has 18 years of service with the Minnesota Department of Natural Resources in both the Bureau of Engineering and the Division of Ecological Services. He has extensive training and experience in hydrography, traditional land surveying, and the technologies used in these industries (CADD, GIS, GPS). Specific experience includes all aspects of channel restoration, initial surveys of project and reference sites, channel design incorporating Rosgen techniques, construction site management, and post construction monitoring.



Registration 2006

Sign up for:

	Price
<input type="checkbox"/> Fluvial Geomorphology and Stream Classification (17-21 July 2006; Fergus Falls)	\$500.00
<input type="checkbox"/> Stream Assessment and Monitoring (21-25 Aug 2006; Whitewater State Park)	\$500.00
<input checked="" type="checkbox"/> Stream Restoration (<i>not being offered in 2006</i>)	N/A

Total: _____

Registrant's contact information:

Name

Telephone number

Address

Email address

Employer

Mail or fax registration to Luther Aadland, MN DNR, 1509 First Ave. N., Fergus Falls, MN 56537; fax 218-739-7601. Payment is due with registration. State of MN staff can pay by purchase order. For all others, checks should be made out to 'MN DNR'. (Sorry, but we can not accept credit cards.)

Registrations will be handled on a first come/first served basis; class size will be limited to 40 students. Cancellations less than two weeks prior to the first day of class will result in a \$50 penalty.

For more information, contact:

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