

2008 Stream Restoration Conference

Monday, November 3, 2008

8:30 - 11:30 am Concurrent Workshops

Workshop 1	Dave Rosgen	Wildland Hydrology	Applying Watershed Assessment of River Stability and Sediment Supply (WARSSS) to Restoration Design
Workshop 2	Lee Patrick	Invasive Plant Control	Invasive Plant Management in the Riparian Setting

11:30 am - 1:00 pm Lunch on your own

1:00 - 5:00 pm General Session: Advancing the Science and Practice of Stream Restoration

Moderator:	Barbara Doll	NC State University	Connecting Stream Restoration to Floodplain Hydrology Data before Site Restoration
	Greg Jennings	NC State University	Conference Overview
	Dave Penrose	NC State University	Ecological Stream Restoration: Field of Dreams or Mitigation Myth?
	Jerry Miller	Western Carolina University	Assessment of Channel Dynamics and Its Implications to Effective Channel Design
	Kevin Moorhead	UNC-Asheville	Design Considerations for Streams in Post-Settlement Alluvium
	Martin Doyle	UNC-Chapel Hill	Five Aspects of Stream Restoration that Need to be Advanced
	Dave Rosgen	Wildland Hydrology	The Essential Eight Phases of Natural Channel Design for River Restoration

5:00 - 7:00 pm Reception Sponsored by Stonefly, Mayfly, and Caddisfly Sponsors

Tuesday, November 4, 2008

8:00 - 11:30 am General Session: Lessons Learned and Future Directions

Moderator:	Karen Hall	NC State University	
	George Athanaskes	Stantec	Future Directions for Stream Restoration – Learning from the Past and Preserving the Future
	Desiree Tullos	Oregon State University	Dam Removal Monitoring Study Designs
	Angela Greene	USDA-NRCS	Lessons Learned the Hard Way in Stream Design and Construction
	Vince Sortman	Biohabitats	Regenerative Stream Restoration and Legacy Sediments
	Will Harman	Baker Engineering	Applying the Science of Stream Restoration: A Practitioner’s Perspective

11:30 am - 1:00 pm Lunch Sponsored by Stonefly Sponsors

1:00 - 2:30 pm Concurrent Sessions - Invited Speakers

A. Engineering & Geomorphology for Designing Natural Rivers

Moderator:	Barbara Doll	NC State University	
	Richard Hey	University of Birmingham, UK	Designing Natural Rivers

B. Ecological Considerations for Stream Restoration

Moderator:	Karen Hall	NC State University	
	Andrew Dolloff	Virginia Tech	Ecological Context for Stream Restoration
	Todd Petty	West Virginia University	Setting Ecological Objectives to Maximize Watershed Scale Benefits of Restoration

C. Mitigation: Federal Agency Perspectives

Moderator:	Anita Goetz	US Fish & Wildlife Service	
	Brian Topping	US Environmental Protection Agency, Wetlands	Stream Mitigation: US Environmental Protection Agency Perspectives
	Scott McLendon	US Army Corps of Engineers, Wilmington Distr	Stream Mitigation: US Army Corps of Engineers Perspectives
	Robin Goodloe	US Fish & Wildlife Service, Georgia	Stream Mitigation: US Fish and Wildlife Perspectives

2:30 am - 3:00 pm Break Sponsored by Mayfly Sponsors

3:00 - 5:00 pm Concurrent Sessions

A. Uncertainty in Stream Design

Moderator:	Peter Wilcock	Johns Hopkins University	
	Peter Wilcock	Johns Hopkins University	Uncertainty in Stream Design
	Emily Bernhardt	Duke University	Uncertainty in Goal Setting and Uncertainty in Project Outcomes: Challenges to Achieving Ecological Improvements Through River Restoration
	Martin Doyle	UNC Chapel Hill	Realistic Expectations for Effectiveness of Restoration: Example Using Field and Modeling Studies of Hyporheic Function Restoration
	Cully Hession	Virginia Tech	Quantifying Uncertainty in Stream Restoration Design: What, Why, and How?

Peggy Johnson	Pennsylvania State University	Uncertainty in the Use of In-Stream Structures for Restoration and Stream Modification Projects
Sue Niezgoda	Rose-Hulman Institute of Technology	Applying Design Failure Modes and Effects Analysis and Cost-Based Risk Assessment to Incorporate Uncertainty in Stream Restoration Design

B. Habitat Considerations in Ecosystem Restoration

Moderator:	Karen Hall	NC State University	
	Daniel Ingram	WK Dickson	Floogie Stream and Wetland Restoration Site Aquatic Habitat Assessment and Restoration: A Case Study
	Elizabeth Sudduth	Duke University	Restoring Ecosystem Functions to Restore Water Quality
	Jeffrey Muehlbauer	UNC Chapel Hill	Knickpoint effects on habitat and the invertebrate community
	Ryan McManamay	Virginia Tech	The effect of gravel addition on flow restoration on the fish assemblage in the Cheoah River, NC
	Mark Wilcox	Montgomery County Dept. of Environmental Pr	Turkey Branch Bi-Modal Stream Restoration - Breathing new life into an old design for greater effectiveness
	Cody Fleece	Stantec Consulting	Examination of large woody debris loading, riparian forest structure and hydraulic geometry relationships to guide restoration efforts in mixed urban and residential watersheds in Harris County, Texas

C. Mitigation: State and Private Perspectives

Moderator:	Upton Hatch	UNC Water Resources Research Institute	
	Marc Recktenwald	NC Ecosystem Enhancement Program	NC Ecosystem Enhancement Program
	Joey Woodard	Tennessee Stream Mitigation Program	Tennessee Stream Mitigation Program
	Carolyn Keeler	McCormick Taylor	Overview of Stream Restoration Opportunities for Virginia
	John Hutton	Wildlands Engineering	Liquid Capital: A Case Study in Stream Mitigation Banking in Georgia
	Richard K. Mogensen	EarthMark Mitigation Services, LLC	Forrest Creek Mitigation Bank - The first approved combination stream and buffer restoration bank in the US
	Wes Newell	Backwater Environmental	Mitigation policy required to stop the continuing trend towards entrenchment and loss of floodplain functions in North Carolina stream restoration projects

5:00 - 7:00 pm Reception Sponsored by Stonefly, Mayfly, and Caddisfly Sponsors

Wednesday, November 5, 2008

8:00 - 10:00 am Concurrent Sessions

A. Stream Design Tools

Moderator:	Art Parola	University of Louisville	
	Daniel Johnson	University of Tennessee	Use of a 2D sediment transport model in a Cumberland Plateau mountainous stream: restoration design implications for streams with coarse bedload
	Mark Tompkins	CH2M Hill	The Trinity River Corridor Project: An integrated hydrology, fluvial geomorphology, and two-dimensional hydraulic and sediment transport modeling based approach to channel and floodplain design.
	John Schwartz	University of Tennessee	Evaluation of pool-riffle maintenance processes in an incised urban channel using a 3D hydrodynamic model: Implications for stream restoration
	Michael Chelminski	Stantec	Integration of CAD design with Multi-Dimensional Hydraulic Modeling for Stream Restoration
	Scott Peyton	Stantec Consulting Services	Practical applications of the FLOWSED/POWERSED model to predict sediment transport
	Michael Geenen	Stantec Consulting	The Use of GPS-Guided Construction Equipment and 3D-Designs for Stream Restoration Construction

B. Riparian Soils and Vegetation

Moderator:	Carter Cone	NC State University	
	Craig Carson	Montgomery County Dept. of Environmental Pr	Healthy soils - what happens on the streambank stays on the streambank
	Michael Wood	The Catena Group	The value of applying principles of soil genesis and morphology to mitigation sites
	Gregg Antemann	Carolina Wetland Services	Managing invasive plant species on stream restoration projects in the Piedmont of North Carolina
	Sarah Marcinko	Equinox Environmental Consultation and Design	The power of partnerships: Cooperative weed management
	Karen Hall	NC State University	Beyond the Buffer: Restoring Riparian, Wetland, and Upland Habitat at Rendezvous Mountain
	Pamela Boaze	Fish and Wildlife Associates	Stream Restoration Techniques Utilized for a Debris Flow Damaged Stream

C. Watershed Planning to Optimize Restoration

Moderator:	Jim Borawa	NC Wildlife Resources Commission	
	Michael Herrmann	NC Ecosystem Enhancement Program	Prioritizing River Basin Restoration -The Ecosystem Enhancement Program Approach

	Michele Drostin	NC Ecosystem Enhancement Program	The NC EEP's watershed planning process: Addressing local watershed needs while identifying priority restoration opportunities
	Anita Goetz	US Fish & Wildlife Service	How the potential for cultural resources at a site can affect stream restoration design and implementation: the Coweeta Creek lesson
	Timothy Ormond	Altamont	From Mountains to Piedmont: A watershed approach for restoring a third order stream in rural western North Carolina
	Greg Melia	NC Ecosystem Enhancement Program	Essential Components of Restoration Plans for Effective Justification and Validation of Stream Restoration Projects
	Todd St. John	Kimley-Horn and Associates, Inc.	There are many lessons to be learned from the complicated world of urban stream rehabilitation.
10:00 am - 10:20 am	Break Sponsored by Mayfly Sponsors		
10:20-12:00 pm	Concurrent Sessions		
	A. Design Innovations		
	Moderator:	Jeff Jurek	NC Ecosystem Enhancement Program
		Brad Fairley	Stantec Consulting
		Mike Fowler	Brown and Caldwell Engineers
		Barbra Utley	GRESS Engineering & Virginia Tech
		David Bidelspach	Wildland Hydrology
		Robert Siegfried	Whitman Reardon & Associates
	Improving Ecological Function in an Urban Stream by Combining Traditional Stream Restoration Techniques with Stormwater Best Management Practices Funded by the Nutrient Offset Program		
	Integrating Stormwater Management and Stream Restoration within Mitigation Bank Sites - Gwinnett County, GA		
	Patterns of streambank retreat on a headwater creek in southwest Virginia: Implications for stream restoration		
	Comparison and use of Southeastern Regional Curves		
	Evaluation of Low Altitude Aerial Photography and Mapping for Stream Assessment and monitoring		
	B. Ecological Assessment: Optimizing Habitat		
	Moderator:	Andrea Leslie	NC Ecosystem Enhancement Program
		Scott Lowe	McCormick Taylor
		Robert Emanuel	Oregon State University
		Kevin Hining	NC Wildlife Resources Commission
		Andrea Leslie	NC Ecosystem Enhancement Program
		Jessica Roberts	NC State University
	Incorporating large woody debris into urban stream restoration - a case study of the design of the northwest branch of the Anacostia River		
	Climate Change & Stream Restoration: Lessons Learned in Oregon Watersheds		
	Monitoring the Effects of Stream Restoration Activities on Trout in Two Western North Carolina Streams		
	Barriers to Aquatic Organism Passage in the Upper Little Tennessee River Basin		
	Field assessment of culvert impacts on stream channel morphology		
	C. Partnerships and Education		
	Moderator:	Julie Elmore	Piedmont Conservation Council, Inc.
		Eric Romaniszyn	Haywood Waterways Association
		Diane Silver	NC Cooperative Extension, Henderson County
		Frank Henning	US EPA
		Eve Brantley	Auburn University
		Callie Moore	Hiwassee River Watershed Coalition
	The Hyatt Creek restoration project - partnerships to improve a severely degraded stream		
	Mud Creek watershed restoration project - lessons learned		
	Linking volunteer-collected data with land use in order to improve watershed management in the upper Oconee Watershed, HUC 03070101		
	Town Creek Park stream restoration - demonstration and education		
	Lessons Learned at the Front Line: The Hiwassee Watershed Experience		
12:00 am - 1:00 pm	Lunch Sponsored by Stonefly Sponsors		
1:00 - 3:00 pm	Concurrent Sessions		
	A. Implementing Restoration Effectively		
	Moderator:	Suzanne Klimek	NC Ecosystem Enhancement Program
		Jagath Santha	RoLanka International
		Will Pederson	River Works
		Darrell Westmoreland	North State Environmental
		Tim Baumgartner	NC Ecosystem Enhancement Program
		Michael McDonald	NC Ecosystem Enhancement Program
	Innovative green solutions for erosion and sediment control in streambank restorations		
	Stream and wetland restoration from a general contractor's perspective		
	Contractor experiences with complex projects		
	Know your site: Avoid the pitfalls of mitigation		
	A Little Bugaboo: Case Study on When to Perform Maintenance on a Newly Restored Stream		
	B. Monitoring Techniques and Results		
	Moderator:	Mac Haupt	NC Ecosystem Enhancement Program

Nathan Jean	Stantec Consulting Services	WARSSS Assessment for the Ecusta Paper Mill site, Brevard, North Carolina
Leslie Ann Martin	Ecological Solutions	Baseflow turbidity of tributaries to the upper Little Tennessee River, North Carolina and Georgia
Christy Mower	Michael Baker Jr.	Year 1 monitoring results of a priority 2 restoration project on Lukey Fork
Mac Haupt	NC Ecosystem Enhancement Program	Monitoring Costs of NCEEP Projects
Joel Tillery	CH2M Hill	Monitoring Results from the McDaniel Farm Stream Restoration Project: A site-specific mitigation project implemented by Gwinnett county Department of Water Resources

C. Coastal Ecosystem Restoration

Moderator:	Kris Bass	NC State University	
	Kevin Tweedy	Michael Baker Engineering	Channel or no channel? A design methodology for Coastal Plain riparian headwater systems
	Jim Halley	EcoEngineering	A Headwater Wetland Restoration Design Methodology: A Case Study in Coastal Mitigation
	Tracy Morris	NC Ecosystem Enhancement Program	Coastal Plain Headwater Stream Restoration: A Case Study
	Evan Corbin	NC State University	Water quality analysis of a restored tidal stream in eastern North Carolina
	Elizabeth Haley	College of Charleston	Challenges in Characterizing a natural forest stream, its tributaries, and cross drainage structures on the Turkey Creek watershed in coastal South Carolina

3:00 am - 3:20 pm Break Sponsored by Mayfly Sponsors

3:20 - 5:00 pm Concurrent Sessions

A. Case Studies: Lessons Learned

Moderator:	Jeff Jurek	NC Ecosystem Enhancement Program	
	Andrew Bick	Confluence Engineering	Restoration of the Flat Fork Valley
	Roger Rhodes	Spartanburg Water Systems	Surviving the Deluge: What Happens when a 500-year storm hits your stream restoration project?
	Shawn Wilkerson	Wildlands Engineering, Inc.	West Fork Linville River Restoration: High-gradient Mountain Stream Restoration
	Miles Hebert	EMH&T	Ecosystem restoration in a lacustrine environment
	Patricia D'Arconte	Town of Chapel Hill	A Case Study in Urban Stream Restoration: 5 years later

B. Effectiveness of Restoration

Moderator:	Callie Moore	Hiwassee River Watershed Coalition	
	Michael Keeler	Williamsburg Environmental Group	Virginia's Stream Mitigation Monitoring and Success Criteria: A practitioner's perspective
	Joshua White	Baker Engineering	A Look at Restoration Approaches and Lessons Learned-The Crowns West Case Study
	Barbara Wiggins	Fish and Wildlife Associates	Stream Monitoring in Western North Carolina on a Public Facility
	Dani Johnson	McCormick Taylor	Meeting the Goals and Challenges of a Restoration Project in the Piedmont of Virginia
	Barbara Doll	NC State University	Assessing Performance of Stream Restoration Projects

C. Watershed Restoration

Moderator:	Ken Carper	WK Dickson	
	Robert Breeding	NC Ecosystem Enhancement Program	Incorporating Dam Removal Projects into EEP Local Watershed plans
	Ken Kloeber	Kloeber Engineering	The Nuts & Bolts of Dam Removal for Restoration: The Civil Engineer's Perspective
	Adam Riggsbee	Restoration Systems, LLC	Dam Removal Benefits Endangered Riverine Species: Carbondon Dam and the Cape Fear Shiner
	Robert Sain	MACTEC Engineering and Consulting	Successful Watershed and River Restoration Following Dam Failure
	Joel Sholtes	UNC Chapel Hill	Stream Restoration's Impact on Flood Waves