

## Edward Watson

Project Hydrologist

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### Profile

Mr. Watson has over 15 years of experience in stream restoration, GIS analysis, and modeling. He leads numerous stream and wetland assessment, design, and restoration initiatives with partners including state and federal agencies, local communities and watershed groups, and private clients.

### Skills and Experience

Led assessment, design, and construction oversight for restoration of approximately 15,000 feet of stream and 10 acres of wetlands on previously farmed land at Hillcrest Wildlife Management Area in Hancock County, WV.

Completed assessment, design, and construction oversight for 18,000 feet of headwater stream restoration in a mined watershed in Logan County, WV.

Completed stream restoration/fish passage projects in the Upper Greenbrier drainage of the Monongahela National Forest, the Nathaniel Mountain Wildlife Management Area, and the upper Shavers Fork watershed.

Led assessment, design, and construction oversight of stream restoration projects totaling 3,000 feet on Horseshoe Run in Tucker County, WV, 3,500 feet on the Cacapon River in Hardy/Hampshire counties, WV, and 4,000 feet in Purcell Park in Harrisonburg, VA.

Led efforts to assess stream conditions and restoration opportunities in the Buffalo Creek watershed in Brooke County, WV and the Piney Creek watershed in Raleigh County, WV.

Developed a Mike 11 GIS hydrologic and hydrodynamic model for the town of Smithfield, WV. The project involved extensive surveying, integration of that data with LiDAR data (a new technology at the time), and hydrometeorologic telemetry, resulting in a calibrated H&H model that was used to document areas of flood risk.

Experienced in teaching workshops on stream assessment, design, and related subjects.

Proficient in processing and using LiDAR data for high-resolution flood and hydraulic modeling, landscape interpretation, and natural stream design.

Experienced with a wide variety of GIS tools, hydrologic modelling applications, and CAD.

### Education

M.S., Forestry, University of Montana, 1999. Emphasis in water resources and hydrology.

B.A., Classics, Dartmouth College, 1993.

Wildland Hydrology Levels I-IV.

### Publications

Edwards P, Watson E. 2002. Converting a Hardwood Watershed to Spruce: Effects on Channel Morphology. In: Welty, Claire (Editor), 2002. AWRA's 2002 Annual Water Resources Conference Proceedings, American Water Resources Association, Middleburg, Virginia, TPS-02-4, 328 pp. Page 163.

Watson E, Potts D, and Donahue J. 1999. Examination of a Technique for Identifying Abandoned Stream Channels on a Northern Rocky Mountain Front Stream. In: Darren S. Olsen and John P. Potyondy (Editors), 1999. Wildland Hydrology. American Water Resources Association, Herndon, Virginia, TPS-99-3, 536 pp. Pages 351-358.