

## **Thomas R. Biebighauser**

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Wetland Restoration and Training  
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## **Curriculum Vitae**

Tom Biebighauser graduated from the University of Minnesota with a B.S. in Wildlife Biology in 1978, and began his career with the USDA Forest Service as a Wildlife Biologist at the Superior National Forest in Minnesota, moving on to the Daniel Boone National Forest in Kentucky in 1988, retiring from the Forest Service on June 1, 2013. He began restoring wetlands in 1982 in Minnesota and has since established over 1,600 wetlands in 20 states and two Canadian provinces. Tom has successfully written hundreds of funding proposals, and has taken the lead in completing numerous partnership projects for restoring emergent, ephemeral, forested, and wet-meadow wetlands on public and private lands. He carries a deep and long-standing concern for environmental issues, and thus, finds it rewarding to repair wetlands that have failed, and to assist like-minded land managers who are initiating wetland and stream restoration programs.

Biebighauser is currently instructing graduate and undergraduate Wetland Restoration Techniques Classes for the University of Louisville J.B. Speed School of Engineering and State University of New York Environmental Science & Forestry Program. He has prepared over 35-lessons describing wetland values, identification of drained wetlands, and the design and construction of wetlands for fish, wildlife, flood control, and for treating storm water. Students from around the world are taking these online classes.

Tom is assisting with the restoration of streams and wetlands in Kentucky and other States including the Coldstream Stream and Wetland Restoration Project in Fayette County, East Fork of Indian Creek in Menifee County, Elisha Creek in Leslie County, Slabcamp Creek and Stonecoal Branch in Rowan County, and Sand Lick Fork in Powell County. He has pioneered the use of groundwater dams in stream and wetland projects as a successful means for restoring the elevation of groundwater across valleys and floodplains. Tom designed and restored a small stream on the Lindsey Wilson College Campus in Adair County, Kentucky and is currently helping to design stream restoration projects in Arizona, Florida, New Mexico, and British Columbia.

Tom is proficient at completing the NEPA documentation for wetland and stream restoration projects, including Environmental Impact Statements, Environmental Assessments, Decision Memos, and Biological Assessments for Federally Endangered and Threatened Species. He regularly assists federal, state, and county agency personnel with the preparation of NEPA documents for stream and wetland projects.

Biebighauser is an expert at identifying historic drainage practices on landscapes that involved the use of wood, rock, clay, cement, and plastic drains. He is skilled at locating springs that were directed underground, along with moved and channeled streams. Having reviewed hundreds of

failed wetland and stream restoration projects, he advocates disabling historic drainage structures for achieving successful stream and wetland restoration. He has developed highly successful (99%) and practical techniques for restoring surface and groundwater wetlands relating to stream restoration projects on modified landscapes in forests, fields, and urban areas.

Biebighauser advanced the use of groundwater dams for wetland restoration and now incorporates them in stream restoration projects. He has built over 900 wetlands in Kentucky, designing and supervising the construction of wet-meadow, shrub, forest, emergent, and ephemeral wetlands. Tom administers over 3-million dollars in stream and wetland restoration contracts annually on public and private lands.

Tom enjoys leading hands-on workshops where participants learn about wetland restoration by actually constructing wetlands, having instructed wetland training in Alabama, Arizona, California, Colorado, Florida, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Maryland, Minnesota, Missouri, Mississippi, New Mexico, New York, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, West Virginia, British Columbia, and Ontario. Tom began serving as an instructor for the semi-annual British Columbia Wetlands Institute in 2003. In 2006, he took the lead in organizing the Wetland Restoration Institute, a week-long program that teaches individuals how to restore wetlands. Two years later, he helped coordinate and instruct the Northeast Wetland Restoration Institute in New York. He has helped over 120 teachers build wetlands at their schools for use as outdoor classrooms, and encourages hundreds of students each year to put on waders and venture into wetlands for exploration.

Tom has instructed wetland restoration classes for the British Columbia Institute of Technology, Eastern Kentucky University, the University of Kentucky, University of Tennessee, Morehead State University, State University of New York-ESF, Sweet Briar College, University of Louisville, University of Minnesota, Vermillion Community College, and Western Kentucky University. He also teaches workshops introducing educators to the WOW (Wonders of Wetlands), Aquatic Wild, and Project WET Curriculum Guides.

Biebighauser has designed and constructed over 300 wetlands on mined lands in Kentucky and West Virginia. These wetlands were built to clean run-off, recharge groundwater, reduce flooding, and improve fish and wildlife habitat. He pioneered the use of groundwater dams for wetland restoration, and is now using them for stream restoration. Tom has developed techniques for using liners, and has built over 90 naturally appearing wetlands on construction fill and on mined lands by using them. He also developed techniques for transforming deep and eroding ponds into attractive and naturally functioning wetlands.

For five years, he served as Chairperson for the Cave Run Chapter of Ducks Unlimited, Inc. Governor Brereton Jones commissioned Tom as a Kentucky Colonel in 1995. In 1999, he received an award from Goodyear Tire and the National Association of Conservation Districts for outstanding accomplishments in resource conservation practices. His passion for wetland restoration has been recognized by three National Taking Wing Awards: for leadership, community involvement, and accomplishments. Congressman Hal Rogers presented Tom with the Kentucky PRIDE award in May 2005, for leadership in wetland restoration. He received four awards in 2007: an Earth Day Award from the Kentucky Environmental Quality Commission, the Kentucky Enrichment Award from The Garden Clubs of Kentucky, an Outstanding Assistance Award from the Lee County Conservation District, and the Forest Service Regional Forester's Natural Resources Leadership Award.

Tom has assisted 24-National Forests with the design and construction of wetland restoration projects. In 2008, The U.S. Forest Service presented him with an award for helping to complete the

Whitaker Wetland Restoration Project on the Wayne National Forest in Ohio. He received an award from the U.S. Forest Service in Missouri for helping to complete the Long Creek Wetland Restoration Project in 2009. In 2010, he received the U.S. Forest Service Regional Forester Natural Resource Honors Award for contributions to the Slabcamp and Stonecoal Stream and Wetland Restoration Project on the Daniel Boone National Forest. He was awarded a National Wings Across the Americas Conservation Award for significant contributions to bat management and wetland restoration in 2011.

Biebighauser has worked for 15-years to develop techniques for restoring wetlands in the arid Southwestern United States and the Southern Interior of British Columbia. He has successfully designed, established, and restored hundreds of wetlands in desert areas to benefit rare and listed wildlife and fish species including bats and amphibians and reptiles. Tom has advanced techniques for restoring springs and the wetlands and streams historically supplied by springs. He has developed and taught methods for restoring wetlands that also provide for livestock watering needs. His practices are strongly held by ranchers and range managers throughout the west.

In 2003, he wrote and published the book *A Guide to Creating Vernal Ponds* in cooperation with Ducks Unlimited, Inc. and the Izaak Walton League of America. His second book, *Wetland Drainage, Restoration, and Repair*, was released in 2007, by the University Press of Kentucky in partnership with Eastern Kentucky PRIDE. Tom's third book, *Wetland Restoration and Construction - A Technical Guide* was published in October, 2011 by the Wetland Trust in New York. Tom has worked closely with the publishers to obtain funding to print and market these books, distributing over 38,000 copies worldwide.

In 2007, Tom worked with partners to establish the Center for Wetlands and Stream Restoration, an association of government, university, nonprofit, and businesses that promotes and helps individuals with wetland and stream restoration programs across the United States and Canada. The website he developed for the Center for Wetlands and Stream Restoration contains numerous publications, photo albums, and documents, along with training announcements.

## **Publications**

- Thomas R. Biebighauser, *A Guide to Creating Vernal Ponds*, USDA Forest Service, 33 pages, 2003.
- Thomas R. Biebighauser, *Vernal Pond Encore*, Birdscapes, Winter 2004, page 26. 2004
- Thomas R. Biebighauser, *Wetland Drainage, Restoration, and Repair*, Lexington, KY, University Press of Kentucky, 2007.
- Thomas R. Biebighauser, *How to Build a Vernal Pond*, Outdoor America, Winter Issue, pp. 16-17, 2008.
- Thomas R. Biebighauser, *Build Your Own Wetland*, Volume 3, Issue 2, Kentucky Woodlands Magazine, pp. 12-15, 2008.
- Thomas R. Biebighauser and Arthur C. Parola, Jr., PhD, P.E. *The University of Louisville Stream and Wetland Restoration Program*, Sustain Magazine, Spring-Summer, 2011, pages 8-13.
- Thomas R. Biebighauser. *Wetland Restoration and Construction - A Technical Guide*. Upper Susquehanna Coalition, 186 pages, 2011
- Thomas R. Biebighauser and Cindy Schafer, Practical Meets Natural, Wetlands aid in stormwater runoff, provide plant and animal habitat. Land Air & Water Magazine, Volume 23 Number 2, Spring 2012, pages 5 and 12.
- Thomas R. Biebighauser, Wetlands for Whitetails, Quality Whitetails Magazine, June-July 2012, pages 36-39.

## Awards

- Conservation Award, Minnesota Deer Hunters Association, 1987
- Certificate of Merit, USDA Forest Service, January 5, 1990, Superior Performance, Zone Wildlife Biologist
- Certificate of Merit, USDA Forest Service, September 1993, Ice Storm Recovery Program
- Certificate of Merit, USDA Forest Service, December 13, 1993. For outstanding performance.
- Certificate of Appreciation, USDA Forest Service, November 28, 1995. For Outstanding Efforts Daniel Boone National Forest Multicultural Advisory Committee
- The League of Kentucky Sportsman Kentucky Conservation Achievement Award, 1997
- The National Taking Wing Award for Leadership, 1998, USDA Forest Service
- USDA Forest Service, Whitaker Wetland Achievement Award, 1998
- Goodyear/NACD Conservation Award of Merit, 1998, Rowan County Conservation District
- Certificate of Appreciation, March 25, 2000, 1999 National Taking Wing Award from Mike Dombek, Chief USDA Forest Service, Ironton Wetlands Restoration
- Certificate of Merit, USDA Forest Service, October 30, 2001, for leadership in building and maintaining cooperative relations
- Rowan County Wildlife Club, 2001, Honorary Membership
- Certificate of Appreciation, USDA Forest Service, Dale Bosworth, Chief Forest Service, October 30, 2001, Wildlife Openings Management Environmental Assessment
- National Taking Wing Award, Licking River Wetland Restoration Project, 2001
- Certificate of Appreciation, USDA, April 3, 2002,
- Certificate of Merit, USDA Forest Service, 2003, Ranger District of the Year, Southern Region
- Kentucky PRIDE Award, 2005
- PRIDE Volunteer of the month, January 2005
- Honor Award, April 19, 2006, Rowan County Conservation District
- USDA Regional Forester's Honor Award, Natural Resources Leadership Award, 2007
- The Garden Clubs of Kentucky, Inc. Kentucky Enrichment Award, April 11, 2007
- Certificate of Appreciation, April 26, 2007, Regional Appeal Review Team
- Lee County Conservation District Award, April 17, 2007
- Commonwealth of Kentucky Earth Day Award, Environmental Quality Commission, 2007
- Honorary Chapter FFA Degree, 2008
- USDA Forest Service Regional Forester Award, 2010, Natural Resource Award for completing the Slabcamp and Stonecoal Stream and Wetland Restoration Project
- Arlie Boggs Conservation Award, 2010
- Certificate of Appreciation, March 2011, Thomas L. Tidwell, Chief, U.S. Forest Service, For Significant Contribution to the following: Bat Management and Wetland Restoration on the Lincoln National Forest

## Websites Showing Restored Wetlands

- [www.wetlandsandstreamrestoration.org](http://www.wetlandsandstreamrestoration.org)
- <http://picasaweb.google.com/tombiebighauser>