WHERE RIVERS ARE BORN/Scientific Imperative For Protecting Small Streams and Wetlands: American Rivers Issues Report



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The environmental organization American Rivers issued on January 29th a report titled:

WHERE RIVERS ARE BORN - The Scientific Imperative For Protecting Small Streams and Wetlands (Second Edition) ("Report").

The Report lists as a cosponsoring organization the University of Georgia River Basin Center.

Authors of the Report include:

- Seth Wenger, PhD Professor, Odum School of Ecology / Director of Science, River Basin Center University of Georgia, Athens, GA.
- Ellen Wohl, PhD Professor, Warner College of Natural Resources Colorado State University, Fort Collins, CO.
- Susan Colvin, PhD Assistant Professor, College of Science, Engineering and Technology Minnesota State University, Mankato, MN.
- Craig Brinkerhoff, PhD Gaylord Donnelley Postdoctoral Fellow, Yale School of the Environment / Yale Institute for Biospheric Studies Yale University, New Haven, CT.
- John Richardson, PhD Professor Emeritus University of British Columbia, Vancouver, BC.

By way of introduction, the Report summarily notes:

- All of humanity and the entire global economy depend on a daily supply of clean water.
- Most of that water originates in small streams and wetlands (i.e., headwaters) which are often unnamed and unmapped.
- Headwaters are essential for:
- Maintaining downstream water quality.
- Preventing flooding.
- Providing wildlife habitat.
- Improving peoples' quality of life.
- The Clean Water Act has proven remarkably successful at protecting/improving water quality.
- At least a portion of the Clean Water Act's success is due to its being interpreted as protecting most small streams and wetlands.

- Shifting definitions of the “Waters of the United States”— the legal term for the Clean Water Act’s jurisdiction— have resulted in different degrees of protection under different federal administrations.
- New rules being considered at the time of the Report are under consideration that could substantially reduce protection for many headwater streams and most freshwater wetlands.

The stated purpose of the Report is to:

… summarize[s] the scientific basis for the value and benefits of small streams and wetlands, which are often unnoticed, unappreciated and unprotected, and yet are a critical part of the natural infrastructure that sustains humanity.

The Report is an update to the original 2003 version and states that it draws on:

… hundreds of relevant scientific papers that have been published in the past two decades.

Topics in the Report include:

- Headwaters in a Changing World.
- WHERE ARE RIVERS BORN?
- Headwater Stream Extent and Connectivity.
- Defining headwater streams.
- The Extent of Headwater Streams is Underestimated.
- Artificial drainages are the headwaters in many agricultural and urban areas.
- Small Streams Provide Critical Land-Water Connections.
- Much of the Riverscape is Underground.
- THE EVOLVING DEFINITION OF WOTUS.
- Small Streams and Wetlands Provide Critical Benefits.
- Flood Control and Water Supply.
- Sediment Trapping.
- Natural Cleansing.
- Nutrients.
- Natural Recycling.
- Biodiversity.
- Interventions.
- Bibliography.

A copy of the Report can be found here.