

# Poor stream health imperils fish

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"There is a direct relationship between land and water use and the imperilment of fishes," said a Virginia Tech researcher. "It is clear that the conservation of our diverse fish fauna and other aquatic resources faces huge challenges ahead as demands grow to impound streams, divert stream flow, and pump groundwater."

"Of the 675 [fish species](#) found in southeastern waters, more than 25 percent are considered imperiled," Donald J. Orth, the Thomas H. Jones Professor of Fisheries and Wildlife Sciences in Virginia Tech's College of Natural Resources and Environment, told the audience of scientists during his keynote address at the Southeastern Fishes Council annual meeting in mid November 2010 in Athens, Ga. The theme of the meeting was "Got Water? At the Crossroads of [Fish](#) Conservation and Water Supply."

Orth's talk, "Mud, Sweat, and Jeers: The Science and Policy of Instream Flows," reviewed both historical events and progress in the development of policies to protect instream flows — the water flow in a stream and an indicator of the stream's ecological health — in the United States, particularly in the Southeast.

"The southeastern United States is one of the fastest growing regions in the country, and the human population continues to expand at a rapid pace," Orth pointed out. "In some states, the population has more than doubled in the past 50 years."

"There is a direct relationship between land and water use and the

imperilment of fishes," he noted. "It is clear that the conservation of our diverse fish fauna and other aquatic resources faces huge challenges ahead as demands grow to impound streams, divert [stream flow](#), and pump groundwater."

Of all animal species on the Federal endangered and threatened species list, 46 percent are found in freshwater habitats. The highest number of species at risk occurs in the southeastern United States.

"While all of the North American ecosystems are in trouble, freshwater habitats are recognized to be at severe risk because of their scarcity and the high demands placed on them by humans," Orth added.

"As various government entities begin to look for future water supply for cities, agriculture, and industry, it is critical to conservation that the habitat needs of fishes and other aquatic biota are taken into consideration," he concluded.

Recent scientific advances in fish conservation were highlighted on Orth's talk, as well as motivation and advice for engaging with state and local leaders in the [water](#) supply planning process.

**More information:** A flash version of the presentation is at:  
[www.fishwild.vt.edu/faculty/Orth/MudSweatJeers/Mud%20Sweat%20Jeers%20Flash%20SWF/index.htm](http://www.fishwild.vt.edu/faculty/Orth/MudSweatJeers/Mud%20Sweat%20Jeers%20Flash%20SWF/index.htm)

Provided by Virginia Tech

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