

SESSION: 078 – THE FUTURE OF AQUATIC SCIENCE: AN EDUCATIONAL SESSION PARTICULARLY FOR UNDERGRADUATES

TITLE: CRITICAL QUESTIONS IN WETLAND SCIENCE

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ABSTRACT:

Wetlands are transitional between terrestrial and aquatic environments. As such, they perform important ecological functions (e.g., nutrient cycling, flood abatement) providing a variety of ecosystem services on which humans rely. Wetlands are also one of the world's most endangered ecosystems. For example, the conterminous US lost 53% of its wetlands between 1800 and 2000; this loss continues. Methods are needed to identify where wetlands should be protected to ensure delivery of vital services and maintain a sustainable landscape, including where and how to effectively restore wetlands. Further, we need to understand how and where wetlands are vulnerable to climate change and the role of wetlands in affecting climate change. Answering these questions requires a landscape perspective and a broad range of research involving expertise in landscape ecology, wetland ecology, biology and microbiology, hydrology, soil biogeochemistry, assessment, modeling, and social science, especially economics. An ability to work collaboratively on teams to synthesize results into applications at watershed, regional, and national scales aimed at practical solutions for resource managers is essential and central to research at a federal environmental laboratory.

WORD COUNT: 178/180

ADDRESSES KEY SESSION QUESTIONS:

Where are the current hotspots of research?

Where do you think the discipline will be headed next?

TOUCHES ON KEY SESSION QUESTIONS:

Why did people start working in this field?

What are some of the most important things we have learned?

How is your job different than a "traditional" academic position?