PhD Position in Hydrology and Biogeochemistry of Isolated Wetlands

A PhD position at Auburn University is available to study the role of geographically isolated wetlands in mitigating non-point source agricultural pollutants. Co-advised by Dr. Frances O’Donnell of Auburn and Dr. Steven Brantley of the Jones Center at Ichauway, the student will characterize the distribution and transport of nitrogen and phosphorus in the catchments of agricultural and reference wetlands. Through collaboration with the project team, these results will be integrated with analysis of the wetland sediment record to understand the trajectory of soil and wetland alteration during agricultural expansion and develop a prioritization framework for wetland conservation. The project offers the opportunity to gain experience in field data collection, statistical analysis, modeling, interdisciplinary collaboration, and stakeholder interaction.

Applicants from a range of disciplinary backgrounds will be considered, including ecology, agricultural sciences, geosciences, and engineering. Experience with hydrologic modeling and/or data analysis, GIS, and programming in a language such as R, Python, or Matlab is preferred. The student will be enrolled in the Earth System Science (ESS) PhD program at Auburn University, an R1 public research university. The ESS program engages faculty from 10 academic departments to provide students with the broad curriculum needed to address complex environmental research questions. Work will be in close collaboration with the Jones Center at Ichauway, a 28,500-acre Research Center located between Albany and Bainbridge, Georgia. The Center’s research, education, and conservation programs focus on ecology and natural resource management. The site includes 16,000 acres of longleaf pine forests, over 1,000 acres of wetlands, and 26 miles of stream and river ecosystems. On-site housing is provided to students as-needed for the duration of their project. Further information can be found on the web site at http://www.jonesctr.org/. A competitive stipend and tuition waiver will be provided over the three-year duration of project. Expected start date is summer or fall 2020.

Interested students should contact Frances O’Donnell (fco0002@auburn.edu) with a CV and brief statement of research experience and interests.