

**Jay R. Christensen, Research Ecologist, in EPA's National Exposure Research Laboratory**

Systems Exposure Division

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**Area of Expertise:** My research interests focus on the spatial and temporal relationship of wetland ecosystems with their surrounding environment, with a particular focus of wetlands within agricultural settings. I investigate and model the spatial and temporal relationship of wetland to stream ecosystems, investigate wetland interactions with nutrient biogeochemical cycles, determine what wetland metrics can represent these connections and interactions at broad spatial scales and study how our selection of scale or resolution influences wetland-related metrics.

**Select Publications:**

- Golden, HE, HA Sander, CR Lane, C Zhao, K Price, E D'Amico, and JR Christensen. 2016. Relative effects of geographically isolated wetlands on streamflow: A watershed-scale analysis. *Ecohydrology*. 9(1): 21-38.
- Christensen JR, MS Nash, DJ Chaloud, A Pitchford. 2016. Spatial Distribution of Small Water Body Types across Indiana Ecoregions. *Ecohydrology* 9:122-137
- Christensen, JR, MS Nash, and AC Neale. 2013. Identifying Riparian Buffer Effects on Stream Nitrogen in Southeastern Coastal Plain Watersheds. *Environmental Management*. 52:1161-1176.
- Allen, P, MS Nash, RC Ohman, RD Lopez, JR Christensen, AM Pitchford, NG Tallent-Halsell, and LC Butler. Characterizing and Mapping of Ecosystem Services (CMESs) Literature Database Version 1.0. U.S. Environmental Protection Agency, Washington, DC, EPA/600/C-11/003, (2011).
- Christensen, JR and WG Crumpton. 2010. Wetland invertebrate community responses to varying emergent litter in a Prairie Pothole emergent marsh. *Wetlands* 30(6):1031-1044.
- Christensen, JR, RD Lopez, MS Nash, AC Neale, DW Ebert and PE Allen. 2009. Methods Development for Mapping Wetlands and their Ecosystem Functions and Services: Year 1 Progress Report. U.S. Environmental Protection Agency, Washington, DC, EPA/600/X-09/013.

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**Education:**

- Ph.D. in Ecology and Evolutionary Biology, 2007, Iowa State University
- B.S. in Conservation Biology, 2000, Brigham Young University

**Professional Experience:**

- Research Ecologist, USEPA, Las Vegas, NV 2009 – Present
- Acting Branch Chief, Landscape Ecology Branch, NERL-ESD, Las Vegas, NV 2013
- Postdoctoral Research Ecologist, USEPA, Las Vegas, NV 2007 – 2009
- Teaching and Research Assistant, Iowa State University, Departments of Environmental Science and Ecology, Evolution, and Organismal Biology, Ames, IA 2001 – 2006
- Research Assistant, Brigham Young University, Provo, UT 1999 – 2001

**Honors and Awards:**

- USEPA Office of Research and Development Bronze Medal 2015
- USEPA Office of Research and Development Teamwork Award 2015
- USEPA ORD-NHEERL Science Integration Award 2009
- Iowa State University Teaching Excellence Award 2005