

Chelsea Clifford

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Education

- Duke University, Durham, NC
 - [PhD, Environment](#), Nicholas School of the Environment 2018
 - [Certificate of College Teaching](#), Duke Graduate School 2018
- [B.A., Biology](#), Carleton College, Northfield, Minnesota 2010

Professional Appointments

- **Post-Doctoral Research Associate, Iowa State University Agricultural & Biosystems Engineering**, Ames, IA 2019-present
- Duke University Nicholas School of the Environment, Durham, NC
 - [PhD Candidate](#) 2016-2018
 - [Teaching Assistant](#) 2014-2016
 - [PhD Student](#) 2013-2016
- Chesapeake Environmental Communications, Gloucester, VA
 - [Data Analyst](#) 2012-2013
 - [Communications Assistant](#) 2011-2012
- [Monitoring Assistant](#), The Nature Conservancy, Charlottesville, VA 2011
- MacArthur Agro-Ecology Research Center, Lake Placid, FL
 - [Research Assistant III](#) 2011
 - [Research Assistant II](#) 2010
- Carleton College, Northfield, MN
 - [Teaching Assistant](#), Biology 2010
 - [Cole Student Naturalist](#), Arboretum 2008-2010
- [Seasonal Interpretive Ranger](#), Virginia Department of Conservation and Recreation, Surry, VA 2009
- [Lab Aide](#), White Mountain Research Center, Bishop, CA 2008

Publications/Presentations

- [Clifford, C.C.](#), Holmquist, J.G., Voss, K., Schmidt Gengenbach, J.; Heffernan, J.B. "[Urban ditches and natural creeks house similar invertebrate communities in a minimally developed California watershed.](#)" In prep.
- [Clifford, C.C.](#), Heffernan, J.B. "[North Carolina Coastal Plain ditch types support distinct hydrophytic communities.](#)" In prep.
- Waring, E.R., Pederson, C.H., Lagzdinš, A., [Clifford, C.C.](#); Helmers, M.J.. "[Water and soil quality over 10 years of no-tillage and cover crops.](#)" Agriculture, Ecosystems & Environment. Sub. 2022

- [Clifford, C.C.](#); Heffernan, J.B. “[North Carolina Coastal Plain ditches unrecognized as novel wetlands despite visibility.](#)” Joint Aquatic Sciences Meeting. Grand Rapids, MI. 16 May 2022
- Seth, J. B.; [Clifford, C.C.](#); Helmers, M.J. “[11-Year Study of Cropping System Influence on Subsurface Drainage Flow in Central Iowa.](#)” 2021
 - AGU Fall Meeting. American Geophysical Union. New Orleans, LA. 17 Dec. 2021
 - 76th Soil and Water Conservation Society International Annual Conference. Soil and Water Conservation Society. Virtual. 26-28 Jul. 2021
 - Iowa Water Conference. Iowa State University. Virtual. 6-8 April 2021
- [Clifford, C.C.](#); M.J. Helmers. “[Tile Drainage Increased Flashiness and Nitrate Concentrations in Midwestern Streams.](#)” Society for Freshwater Science Annual Meeting. Society for Freshwater Science. Virtual. 2021
- [Clifford, C.C.](#); M.J. Helmers. “[Consistent fertilizer application increased corn yields without change in nitrate export.](#)” 2021
 - 2022 International Drainage Symposium. Soil and Water Conservation Society. Des Moines, IA. 2 Sep. 2022
 - 76th Soil and Water Conservation Society International Annual Conference. Soil and Water Conservation Society. Virtual. 28 Jul. 2021
 - Iowa Water Conference. Iowa State University. Virtual. 6-8 April 2021
- [Clifford, C.C.](#); J.B. Heffernan. “[Artificial Aquatic Ecosystems.](#)” *Water* 2018, 10, 1096. <https://doi.org/10.3390/w10081096> 2018
- [Clifford, C.C.](#); J.B. Heffernan. “[Similar processes explain water quality in artificial and natural US lakes.](#)” Society for Freshwater Science Annual Meeting. Society for Freshwater Science. Detroit, MI. 24 May 2018
- [Clifford, C.C.](#); J.B. Heffernan. “[North Carolina Coastal Plain ditch types support distinct hydrophytic communities.](#)” Society for Freshwater Science Annual Meeting. Society for Freshwater Science. Raleigh, NC. 8 Jun. 2017
- [Clifford, C.C.](#); J.B. Heffernan. “[Cultural Biases Limit Ecosystem Services Provided by Ditches and Connected Ecosystems.](#)” 2017 AWRA Spring Specialty Conference: Connecting the Dots: The Emerging Science of Aquatic System Connectivity. American Water Resources Association. Snowbird, UT. 2 May 2017
- [Clifford, C.C.](#); A.J. Felson. “[Introduction to the Earth Stewardship Initiative Demonstration Projects.](#)” Novel Ecosystems in the Anthropocene. Ecological Society of America. Fort Lauderdale, FL. 12 Aug. 2016
- [Clifford, C.C.](#); J.B. Heffernan. “[What drives wetland structure in ditches?](#)” Novel Ecosystems in the Anthropocene. Ecological Society of America. Fort Lauderdale, FL. 10 Aug. 2016
- [Clifford, C.C.](#); J.B. Heffernan. “[Ditch types host different plant communities with similar wetland indicator statuses.](#)” 2016
 - North Carolina Wetlands Symposium. Duke University. Durham, NC. 4 Mar. 2016
 - Freshwater in the North Carolina Coastal Plain: Understanding and Preparing for 21st Century Challenges. North Carolina State University Water Resources Research Institute. New Bern, NC. 16 Feb. 2016
- Clifford, C.C. “[Anthropogenic Ecosystems Have Conservation Potential.](#)” Joint Ecology / Marine Lab Symposium. Beaufort, NC. 14 Nov. 2015
- [Clifford, C.C.](#); J.G. Holmquist; J. Schmidt Gengenbach; J.B. Heffernan. “[Ecosystem artificiality does not impact aquatic communities.](#)” Ecological Science at the Frontier. Ecological Society of America. Baltimore, MD. 13 Aug. 2015
- Clifford, C.C.; J. B. Heffernan. “[Artificial Aquatic Systems.](#)” *Connections in Ecology*. Duke University. Beaufort, NC. 17 Apr. 2015
- [Clifford, C.C.](#); J.G. Holmquist; J. Schmidt Gengenbach; J.B. Heffernan. “[Artificial vs. natural streams: an invertebrate case study from Bishop,](#)” 2014

California." Poster.

- Joint Aquatic Sciences Meeting. Portland, OR. May 22, 2014
 - Ecology Across Scales. Duke University. Durham, NC. Mar. 21, 2014
 - Water Resources Research Institute Annual Conference. NCSU. Raleigh, NC. Mar. 19, 2014
- Clifford, C.C.; E.H. Boughton; P.J. Bohlen; P. Quintana-Ascencio; H. Swain. "Florida ranch wetland plant community response to increased water." Poster. Southeastern Ecology and Evolution Conference. Auburn University. Mar. 27, 2011
- Kohman, M.M.; C.W. Fraisse; C.C. Clifford; P.J. Bohlen. "The Carbon Footprint for Florida Beef Cattle Production Systems: A Case Study with Buck Island Ranch." *The Florida Cattleman*. March 2011

Honors

- Anthropocene Farm Fellowship, The Kenan Institute for Ethics 2018
- Duke University Wetland Center Graduate Student Research Support Grant 2017
- Earth Stewardship Research Fellowship, Earth Stewardship Initiative 2014
- Graduate Research Fellowship, National Science Foundation 2013
- Kolenkow-Reitz Fellowship, Carleton College 2009-2010

Service/Leadership

- Volunteer Scientist, Story County Conservation 2022
- Scientist, Skype A Scientist 2020
- Duke Women in Science and Engineering
 - Sci-Fi Book Club Coordinator 2016-2018
 - Social Media Editor 2014-2017
- Scientist, Science Research Education Networking Triangle 2014-2018
- Scientist, Durham County Environmental Field Day 2017
- Judge, North Carolina Student Academy of Sciences 2013-2017
- Nicholas PhD Advocacy Council
 - Environment Representative, webmaster 2016-2017
 - Coordinator, Nicholas School Graduate Afternoon Seminar 2015-2016
- Volunteer steward, Friends of the Mountain-to-Sea Trail 2014-2016
- STEM Days volunteer, Museum of Life and Science 2016
- Duke STEM/MAT Network 2016
- Founder/Coordinator, Duke Nature and People 2015-2016
- Scientist, NC Science Festival Invite-a-Scientist 2014-2015
- Coordinator, Duke River Center Chalk Talks 2015
- Volunteer steward, Ellerbe Creek Watershed Association 2013-2015
- Mentor, Durham Women and Math 2013-2014
- Gloucester Blueways Committee 2012-2013
- Naturalist, Kids Kayak and Conservation Camp 2012-2013
- Naturalist, Beaverdam Parks Spring Festival 2013
- Geologist, Girl Scout Math and Science Day 2010
- Volunteer steward, Carleton College Arbor 2006-2009
- Volunteer trail maintainer, California Backcountry Horsemen 2008

Certifications

Virginia DGIF Boater Education	2012
Virginia Master Naturalist	2012
PADI Open Water Diver	2010
US (Currently Iowa) Driver's License	2006

Affiliations/Memberships

Society for Freshwater Science	2017-2018, 2021-present
American Geophysical Union	2017
American Water Resources Association	2017
Ecological Society of America	2014-2016
Graduate Women in Science (Rho Tau)	2014-2016
North Carolina Association of Water Resources	2014-2016
Sigma Xi	2010-2016