

ANDREW R MURRAY

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EDUCATION:

***Ph.D. Geography**, University of North Carolina – Chapel Hill (Began January, 2018)

M.A. Geography, University of Cincinnati, December 2015 (GPA: 3.83)

B.A. Geography (Environmental Emphasis), Minor: Political Science December 2012, University of Cincinnati

GIS Certificate, December 2012, University of Cincinnati

EMPLOYMENT HISTORY:

The University of North Carolina – Chapel Hill

- Teaching Assistant, January 2018 – Present
 - TA for Introduction to Physical Geography, Weather & Climate, and Introduction to Geographic Information (55 to 125 Students each)
- Researcher – January 2019 - Present
 - SEARCH Project on Cardiovascular health interventions. Provided spatial statistics and geographic services to the project. (PI: Dr. Leah Frerichs)
- Research Hub Associate, July 2018 – December 2018
 - Provided GIS support services to students and faculty through UNC help desk

Oak Ridge Institute for Science and Education—Research Fellow, December 2016 – December 2017

Federal Contractor for The United States Environmental Protection Agency, Office of Research and Development

- Provide GIS support and quantitative analysis for domestic groundwater well and aquifer vulnerability studies within US EPA's National Risk Management Research Laboratory
- Research focused on private drinking water supplies vulnerability to leaking underground petroleum storage tanks and potential leaks from oil pipelines in the United States

The United States Environmental Protection Agency, Office of Research and Development—Student Contractor, May 2015 – December 2016

- Created a national dataset on private domestic well use for federal vulnerability assessments using geostatistical methods, dasymetric mapping, and US Census databases
- Provided general geospatial and statistical support for the US EPA's underground storage tanks program
- Contributed to internal EPA reports and peer reviewed paper on groundwater vulnerability
- Presented research to public interest groups, professional conferences, and federal program offices

The University of Cincinnati —Graduate Assistant, January 2015 – June 2015

- TA for Introduction to Physical Geography (~125 Students)

PUBLICATIONS:

Andrew Murray, James W. Weaver, Fran Kremer. 2019. *Estimating Domestic Groundwater Well Use in the United States*. *Journal of the American Water Resources Association* (In Review).

Weaver, J.W., **Murray, A.R**, Kremer, F.V., 2017, Proximity of Private Domestic Wells to Underground Storage Tanks: Oklahoma Pilot Study, U.S. EPA/600/R-17-209.

Weaver, J.W., **Murray, A.R**, Kremer, F.V., 2017, Estimation of the Proximity of Private Domestic Wells to Underground Storage Tanks: Oklahoma Pilot Study, Accepted for publication, *Science of the Total Environment*.

Andrew Murray, *A Dasymeric Approach to Estimating Domestic Groundwater Well Use in the United States*. MA Thesis. University of Cincinnati, December, 2016

Richard Beck et. Al. *Comparison of Satellite Reflectance Algorithms for Estimating Phycocyanin Values and Cyanobacterial Total Biovolume in a Temperate Reservoir Using Coincident Hyperspectral Aircraft Imagery and Dense Coincident Surface Observations*. *Remote Sensing* (2017).

Richard Beck et. Al. *Comparison of satellite reflectance algorithms for estimating chlorophyll- a in a temperate reservoir using coincident hyperspectral aircraft imagery and dense coincident surface observations*. *Remote Sensing of Environment* (2016).

PRESENTATIONS:

- Andrew Murray, Montana Eck, 2019, *Impact of Climate Extremes on Crop Yields in the Southeastern United States*. 4/12/201. UNC Climate Symposium, Chapel Hill, NC.
- Andrew Murray, 2018, *Assessing Private Domestic Well Vulnerability to Methane Migration from Unconventional Shale Gas Drilling in the United States*. 12/18/2018. American Geophysical Union Fall Meeting, Washington D.C.
- Andrew Murray, 2016, *The Search for Water: An investigation into Domestic Groundwater Well Locations in the United States and the potential of contamination from leaking underground storage tanks*. 4/31/2016, The Association for American Geographers Annual Conference, San Francisco, CA.
- Andrew Murray, 2016, *Private Domestic Well Locations in the United States*. 4/12/2016, U.S. EPA GIS Workshop, Cincinnati, OH.
- Andrew Murray, 2015, *Estimating Private Domestic Well Use in the United States: A Pilot Study in Oklahoma*. 9/14/2015, National Tanks Conference, Phoenix, AZ. (Also presented at ELDAAG 2015).
- Andrew Murray, Jim Weaver, Fran Kremer, Brian Dyson. 2015, *Use of Innovative GIS for Application of Structured Decision Making*, 9/13/2015, National Tanks Conference, Phoenix, AZ.

AWARDS:

- Best Graduate Student Poster (2nd place), UNC Climate Symposium (2019)
- University of Cincinnati Graduate Incentive Award (2015 & 2016)
- U.S. EPA / University of Cincinnati Student Traineeship Award (2015 & 2016)