ANDREW R MURRAY

112 Walden Dr. | Carrboro, NC 27510 | (215) 913-7825 | ARMurray189@live.unc.edu

EDUCATION:

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

M.A. Geography, University of Cincinnati, December 2016 (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 (~70 Students)
- General grading of papers and assessments as well as any student extra help

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 Department of Geography—Graduate Assistant, January 2015 – June 2015

- Administered online coursework for over 125 students
- Designed and administered exams
- Held office hours to assist undergraduate students with course material
- Provided research and general teaching support to The University's Geography department

PUBLICATIONS:

Andrew Murray, James W. Weaver, Fran Kremer. 2017. *Estimating Domestic Groundwater Well Use in the United States. Journal of the American Water Resources Association* (Submitted).

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 Dasymetric Approach to Estimating Domestic Groundwater Well Use in the United States.* MA Thesis. University of Cincinnati, December, 2016 (Embargoed through 2018).

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, 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:

- University of Cincinnati Graduate Incentive Award (2015 & 2016)
- U.S. EPA / University of Cincinnati Student Traineeship Award (2015 & 2016)

RELEVANT SKILLS:

All ESRI Products, Web Map creation, Publishing Web Services and apps, IDRISI TerrSet, database management, metadata management, Python, R, ENVI, Remote Sensing including the use of Landsat, LiDAR, and PhoDAR (Drone Imagery).

RELEVANT COURSEWORK:

Remote Sensing (Introductory through Advanced)

Advanced Spatial Statistics

Systems Modelling and Analysis

Hydrology

GIS Programming (Python / VB.net)

Digital Terrain & Watershed Mapping

Data Mining & Visualization

Advanced Geographic Information Systems