MEGAN M. COFFER | COFFER.MEGAN@EPA.GOV

EDUCATION

North Carolina State University, Center for Geospatial Analytics, Raleigh, NC 2018 – present
Ph.D. Student, Center for Geospatial Analytics, Current GPA: 4.0
Advisor: Dr. Helena Mitasova and Dr. Blake Schaeffer

North Carolina State University, College of Sciences, Raleigh, NC 2015 – 2017
M.S. Marine, Earth and Atmospheric Science, May 2017, GPA: 3.9
Graduate Certificate, Geographic Information Systems (GIS), May 2017
Advisor: Dr. Erin Lee Hestir

Meredith College, Raleigh, NC 2011 – 2015
B.S. Mathematics, Minors in Statistics and Psychology, GPA: 3.4

RESEARCH EXPERIENCE

U.S Environmental Protection Agency (EPA), Office of Research and Development
ORISE Research Fellow with Dr. Blake Schaeffer 2017 – Present
I contribute to two main research projects. The first uses satellite remote sensing from MERIS and OLCI to assess the status of Cyanobacterial harmful algal blooms (cyanoHAB) for inland lakes across the United States. The second uses commercial remote imagery to identify the extent of seagrass beds in coastal waters and estimate their carbon storage.

North Carolina State University, Center for Geospatial Analytics
Research Assistant with Dr. Joshua Gray 2017
I contributed to a research project that aimed to use continuous change detection and classification (CCDC) with the Landsat series to both identify deforested regions across Indonesia and determine what land cover replaced these regions after deforestation had occurred.

North Carolina State University, Department of Marine Earth and Atmospheric Science
Graduate Research Assistant with Dr. Erin Lee Hestir 2015 – 2017
I analyzed the relationship between environmental variables and CO_2 flux from Arctic wetlands using a statistical model combining micrometeorological flux tower data and satellite observations.
Undergraduate Research Assistant with Dr. Sandra Yuter 2014 – 2015
I contributed to a project to create a more realistic and informative three-dimensional representation of thunderstorm structure to supplement existing schematics. This was achieved through the remote operation of two research radars located near Denver, CO during a one-month period.

TEACHING EXPERIENCE

North Carolina State University, Department of Marine Earth and Atmospheric Science
Teaching Assistant 2015 – 2017
Introduction to Weather and Climate Laboratory (MEA 135) with Dr. Brian Eder

RELEVANT SKILLS

Environmental data science, remote sensing image processing, geospatial analytics and visualization in both R and ArcGIS (proficient) as well as experience in Python, MATLAB, and ENVI/IDL
Scientific instrumentation and data processing including satellite data, weather radar, weather stations, micro-meteorological flux towers, field spectroscopy, and GPS
Excellent oral and written communication skills developed through presentation of scientific results, development of research proposals, and university guest lectures
Effective leadership and supervision in academic and non-academic settings

HONORS AND AWARDS

NC Graduate School Travel Award	2019
Accepted to NSF fully-funded CyberGIS weeklong workshop at University of Illinois	2019
NC State University Graduate Fellowship	2018
NCAEP David Griffin Environmental Scholarship	2017
Graduate Climate Conference Travel Award	2016
Meredith College Research & Travel Grant Recipient	2014 – 2015
NCAA Woman of the Year, Nominee	2015
Alpha Kappa Alpha Educational Advancement Foundation Award, Recipient	2014
USA South Athletic Conference Champion & All-Academic Honoree	2014
The National Mathematical Contest in Modeling, Honorable Mention	2015
National Student Athlete Award, Honoree	2013 – 2015

PUBLICATIONS

Coffer, M., Schaeffer, B., Darling, J., Urquhart, E., & Salls, W. (2019). Quantifying national and regional cyanobacterial occurrence in US lakes using satellite remote sensing. *Ecological Indicators.* (*Under review*).

Salls, W., Schaeffer, B., Keith, D., Urquhart, E., **Coffer, M.,** Seegers, B., Binding, C., & Stumpf, R. (2019). An initial validation of the Maximum Chlorophyll Index (MCI) for the Sentinel-2 satellites across U.S lakes. (*In clearance).*

Coffer M. & Hestir, E. (2019). Variability in trends and indicators of CO_2 Exchange across Arctic wetlands. *Journal of Geophysical Research: Biogeosciences*, 124, 1248-1264. https://doi.org/10.1029/2018JG004775.

Coffer, M., Schaeffer, B., Urquhart, E., Darling, J. & Salls, W. (2018). A Method for Quantifying the Number of U.S. Lakes with Cyanobacterial Harmful Algal Blooms Using Satellite Remote Sensing. *Proc. SPIE 10767, Remote Sensing and Modeling of Ecosystems for Sustainability XV, 1076709*. doi:10.1117/12.2319669.

SELECT PRESENTATIONS

Schaeffer, B., Johnston, J., Urquhart. E., **Coffer, M.,** Salls, W., & Seegers, B. (2019) Green stuff from space! *NASA HQ Applied Sciences Program.* Washington, DC.

Coffer, M. (2019). An update on CyAN cyanobacterial metrics and drinking water applications. *U.S. EPA Office of Water.* Washington, DC.

Coffer, M., Schaeffer, B, & Mitasova, H. (2019). Assessing the frequency of cyanobacterial blooms in waterbodies across the United States. *14th Annual NC State University Graduate Student Symposium.* Raleigh, NC. **3rd Place Winner.**

Coffer, M., Schaeffer, B, Darling, J., Urquhart, E. & Salls, W. (2018). Assessing the Impact of Cyanobacterial Harmful Algal Blooms on Drinking Water Intakes Across the United States. *AGU Fall Meeting.* Washington, DC.

Coffer, M., Schaeffer. B., Urquhart, E., Darling, J. & Salls, W. (2018). A Method for Quantifying the Number of U.S. Lakes with Cyanobacterial Harmful Algal Blooms Using Satellite Remote Sensing. *SPIE Annual Conference*. San Diego, CA.

Coffer. M., Schaeffer. B., Urquhart, E., Darling, J. & Salls, W. (2018). Using Satellite Data to Monitor the Impacts of CyanoHAB Events on Drinking Water: A Texas Case Study. *Stormwater Conference.* South Padre Island, TX.

Coffer, M. & Hestir, E. (2017). Evaluating the Carbon Balance of Arctic Wetlands: A Synthesis. *NC GIS Conference*. Raleigh, NC.

Coffer, M. & Hestir, E. (2016). Developing indicators of CO_2 flux from Arctic wetlands. *AGU Fall Meeting*. San Francisco, CA.

Coffer, M. & Hestir, E. (2016). Analyzing Trends of CO_2 flux in Arctic Wetlands. *10th Annual Graduate Climate Conference*. Seattle, WA.

Coffer, M., Ade, C., & Hestir, E. (2016). Determining the optimal view angle for hyperspectral-based estimates of wetland plant biomass. *NASA HyspIRI Symposium*. Greenbelt, MD.

Coffer, M., Berry, S., Corbin, N., Endries, J., Miller, M., & Yuter, S. (2015). Radar Observations of Storms for Education. *American Meteorological Society 14th Annual Conference.* Phoenix, AZ.

PROFESSIONAL AFFILIATIONS

National Association of Environmental Professionals	2017 – Present
American Geophysical Union	2016 – Present
North American Carbon Program	2015 – Present
American Meteorological Society	2013 – Present
Association for Women in Mathematics	2012 – 2015