Peter Whitman

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(919) 593-8917

EDUCATION

University of British Columbia — **Vancouver, BC**
M.Sc. Geography — 08/2019
Supervisor: Dr. Brian Klinkenberg
Thesis: An exploration of computational methods for classifying sediment patches within archived aerial photographs of gravel-bed rivers

Carthage College — **Kenosha, WI**
B.A. Geoscience, Geographic Information Science, Environmental Science — 05/2017

RESEARCH EXPERIENCE

U.S. Environmental Protection Agency — **Raleigh, NC**
ORISE Post-Master's Research Fellow — 09/2019 – 09/2022

University of British Columbia — **Vancouver, BC**
Graduate Research Assistant — 05/2018 – 08/2019

Carthage College — **Kenosha, WI**
Undergraduate Research Assistant — 01/2017 – 05/2017

Round River Conservation — **Salt Lake City, UT**
Student Researcher — 09/2015 – 12/2015

PROFESSIONAL EXPERIENCE

Carthage College — **Kenosha, WI**
Student Manager — 09/2016 – 05/2017

City of Edina — **Edina, MN**
Geographic Information Systems Intern — 06/2016 – 08/2016

Minnesota Department of Natural Resources — **Saint Paul, MN**
Invasive Species Program Intern — 06/2015 – 09/2015

City of Saint Paul — **Saint Paul, MN**
Urban Forestry Intern — 06/2014 – 08/2014

TEACHING EXPERIENCE

University of British Columbia **Vancouver, BC**
Graduate Teaching Assistant 09/2017 – 08/2019
Introduction to Remote Sensing (GEOB 373)
Advanced Geographic Information Science (GEOB 370)
Introduction to Geographic Information Science (GEOB 270)

Carthage College **Kenosha, WI**
Undergraduate Teaching Assistant 09/2016 – 05/2017
Introduction to Geographic Information Science (GEO 1610)

HONORS & AWARDS

U.S. Environmental Protection Agency **Raleigh, NC**
Rising Star Award 2022

University of British Columbia **Vancouver, BC**
Outstanding Teaching Assistant Award 2019
Faculty of Arts Graduate Student Award 2017 – 2019
International Tuition Award 2017 – 2019

Government of Canada, Social Sciences and Humanities Research Council **Ottawa, ON**
Explore Grant 2018

Carthage College **Kenosha, WI**
Carthage College Distinguished Senior, Nominee 2017
Environmental Science Department Distinguished Senior 2017
Geospatial Science Department Distinguished Senior 2017
Dean's List 2013 – 2017
Robert Todd Scholarship 2013 – 2017

SERVICE

University of British Columbia **Vancouver, BC**
Curriculum Development 09/2018 – 05/2019
GIS & Geographical Computation Minor
Peer Mentor 09/2018 – 05/2019

Carthage College **Kenosha, WI**
Environmental Science Department Student Ambassador 09/2016 – 05/2017

PUBLICATIONS

Coffer, M., Schaeffer, B., Zimmerman, R., Hill, V., Li, J., Islam, K., & **Whitman, P.** (2020). Performance across WorldView-2 and RapidEye for reproducible seagrass mapping. *Remote Sensing of Environment*. DOI: 10.1016/j.rse.2020.112036.

Coffer, M., **Whitman, P.**, Schaeffer, Hill, V., Zimmerman, R., Salls, W., Lebrasse, M., & Graybill, D. (2022). Vertical artifacts in high-resolution WorldView-2 and WorldView-3 satellite imagery of aquatic systems. *International Journal of Remote Sensing*. DOI: 10.1080/01431161.2022.2030069.

Lebrasse, M., Schaeffer, B., Coffer, M., **Whitman, P.**, Zimmerman, R., Hill, V., Islam, K., Li, J., & Osburn, C. (2022). Temporal Stability of Seagrass Extent, Leaf Area, and Carbon Storage in St. Joseph Bay, Florida: a Semi-automated Remote Sensing Analysis. *Estuaries and Coasts*. DOI: 10.1007/s12237-022-01050-4.

Lebrasse, M., Schaeffer, B., Zimmerman, R., Hill, V., Coffer, M., **Whitman, P.**, Salls, W., Graybill, D., & Osburn, C. (2022). Simulated response of St. Joseph Bay, FL seagrass meadows and blue carbon to anthropogenic and climate impacts. *Marine Environmental Research*. DOI: 10.1016/j.marenvres.2022.105694

Schaeffer, B., **Whitman, P.**, Conmy, R., Salls, W., Coffer, M., Graybill, D. & Lebrasse, M., (2022). Potential for commercial PlanetScope satellites in oil response monitoring. *Marine Pollution Bulletin*. DOI: 10.1016/j.marpolbul.2022.114077

Whitman, P., Schaeffer, B., Salls, W., Coffer, M., Mishra, S., Seegers, B., Loftin, K., Stumpf, R., & Werdell, J. (2022). A validation of satellite derived cyanobacteria detections with state reported events and recreation advisories across U.S. lakes. *Harmful Alage*. DOI: 10.1016/j.hal.2022.102191.

Coffer, M., Graybill, D., **Whitman, P.**, Schaeffer, B., Salls, W., Zimmerman, R., Hill, V., Lebrasse, M., Li, J., Islam, K., & Keith, D. (*In review*). Providing a management framework for seagrass mapping in United States coastal ecosystems using high spatial resolution satellite imagery. *Journal of Environmental Management*.

Lebrasse, M. Schaeffer, B., Bohnenstiehl, D., Osburn, C., He, R., Coffer, M., **Whitman, P.**, Salls, W., & Graybill, D. (*In review*). Assessment of dissolved organic carbon flux in a North Carolina tidal marsh. *Earth Science Reviews*.

Salls, W., Schaeffer, B., Pahlevan, N., Keith, D., Binding, C., Stumpf, R., Seegers, B., Werdell, P., Coffer, M., & **Whitman, P.** (*In preparation*). Satellite monitoring of chlorophyll in U.S. lakes: a national-scale validation of the Sentinel-2 Maximum Chlorophyll Index. *Environmental Monitoring and Assessment*.

Schaeffer, B., **Whitman, P.**, Conmy, R., Vandermeulen, R., Chuanmin, H., Mannino, A., & Salisbury, J. (*In preperation*). GLIMR potential in oil spill and water quality monitoring. *Journal of Geophysical Research.*

TECHNICAL REPORTS

Landry, B., Tango, P., Bisland, C., Coffer, M., Dennison, B., Hill, V., Lebrasse, C., Li., J., Orth, R., Patrick, C., Schaeffer, B., **Whitman, P.**, Wilcox, D., & Zimmerman, R. (2021). Exploring Satellite Image Integration for the Chesapeake Bay SAV Monitoring Program – A STAC Workshop. STAC Publication Number 21-001. Edgewater, MD.

SELECTED PRESENTATIONS

Cyanobacteria assessment network (July 2021). *U.S. Environmental Protection Agency – Region 8.* Remote. **Invited Speaker.**

Oil spill detection with commercial satellite imagery (February 2021). *U.S. Environmental Protection Agency – Board of Scientific Advisors.* Remote.

Expanding nutrient indicator monitoring with satellites (November 2020). *U.S. Environmental Protection Agency – Nutrient Scientific Technical Exchange Partnership & Support Program*. Remote.

Green stuff from space (May 2020). *NASA HQ Applied Sciences Program.* Remote.

Building a bridge between aerial photographs and digital aerial imagery to retrospectively analyze sediment in the Fraser River (May 2019). *University of British Columbia Graduate Symposium.* Vancouver, BC.

Understanding the spread of Buckthorn in Minnesota using a habitat suitability model (April 2017). *National Council on Undergraduate Research Conference*. Memphis, TN.

SKILLS

Methods: frequentist and Bayesian statistics, machine learning, digital image processing, spatiotemporal statistics, object-based image analysis, image classification, photogrammetry, atmospheric correction, satellite validation, data visualization, signal processing

Software: ENVI/IDL, ESRI ArcGIS products, Agisoft Photoscan, QGIS, GeoDa, FUSION/LDV, Adobe Photoshop, Adobe Illustrator, Microsoft Office Suite, Google Workspace

Programming & Computing: Python, R, MATLAB, JavaScript, Google Earth Engine, SQL, Unix, high performance computing, parallel processing, version control

Packages: *Python* – GDAL/OGR, TensorFlow, OpenCV, NumPy, ArcPy, Matplotlib, netCDF4, Pandas, GeoPandas; *R* – ggplot2, raster, ncdf4, stats, caret, sp, sf, rgdal, spatstat, maxent, boot, glcm

Scientific Instrumentation & Field Work: field & lab spectroscopy, imaging systems, GPS, forest inventory, water sampling, land surveying, plant and wildlife surveys

Communication: peer-reviewed publications, technical reports, research proposals, lectures, presentations, technical demonstrations, stakeholder engagement, mentorship, team collaboration