

**Peter Whitman**  
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(919) 593-8917

## **EDUCATION**

<b>University of British Columbia</b>	<b>Vancouver, BC</b>
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	

<b>Carthage College</b>	<b>Kenosha, WI</b>
B.A. Geoscience, Geographic Information Science, Environmental Science	05/2017

## **RESEARCH EXPERIENCE**

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

<b>University of British Columbia</b>	<b>Vancouver, BC</b>
Graduate Research Assistant	05/2018 – 08/2019

<b>Carthage College</b>	<b>Kenosha, WI</b>
Undergraduate Research Assistant	01/2017 – 05/2017

<b>Round River Conservation</b>	<b>Salt Lake City, UT</b>
Student Researcher	09/2015 – 12/2015

## **PROFESSIONAL EXPERIENCE**

<b>Carthage College</b>	<b>Kenosha, WI</b>
Student Manager	09/2016 – 05/2017

<b>City of Edina</b>	<b>Edina, MN</b>
Geographic Information Systems Intern	06/2016 – 08/2016

<b>Minnesota Department of Natural Resources</b>	<b>Saint Paul, MN</b>
Invasive Species Program Intern	06/2015 – 09/2015

<b>City of Saint Paul</b>	<b>Saint Paul, MN</b>
Urban Forestry Intern	06/2014 – 08/2014

## TEACHING EXPERIENCE

### University of British Columbia

Graduate Teaching Assistant

Introduction to Remote Sensing (GEOB 373)

Advanced Geographic Information Science (GEOB 370)

Introduction to Geographic Information Science (GEOB 270)

**Vancouver, BC**

09/2017 – 08/2019

### Carthage College

Undergraduate Teaching Assistant

Introduction to Geographic Information Science (GEO 1610)

**Kenosha, WI**

09/2016 – 05/2017

## HONORS & AWARDS

### U.S. Environmental Protection Agency

Rising Star Award

**Raleigh, NC**

2022

### University of British Columbia

Outstanding Teaching Assistant Award

Faculty of Arts Graduate Student Award

International Tuition Award

**Vancouver, BC**

2019

2017 – 2019

2017 – 2019

### Government of Canada, Social Sciences and Humanities Research Council

Explore Grant

**Ottawa, ON**

2018

### Carthage College

Carthage College Distinguished Senior, Nominee

Environmental Science Department Distinguished Senior

Geospatial Science Department Distinguished Senior

Dean's List

Robert Todd Scholarship

**Kenosha, WI**

2017

2017

2017

2013 – 2017

2013 – 2017

## SERVICE

### University of British Columbia

Curriculum Development

GIS & Geographical Computation Minor

Peer Mentor

**Vancouver, BC**

09/2018 – 05/2019

09/2018 – 05/2019

### Carthage College

Environmental Science Department Student Ambassador

**Kenosha, WI**

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, B., 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.
- Coffer, M., Graybill, D., **Whitman, P.**, Schaeffer, B., Salls, W., Zimmerman, R., Hill, V., Lebrasse, M., Li, J., Islam, K., & Keith, D. (2023). Providing a management framework for seagrass mapping in United States coastal ecosystems using high spatial resolution satellite imagery. *Journal of Environmental Management*. DOI: 10.1016/j.jenvman.2023.117669.
- 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
- 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., 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
- Schaeffer, B., **Whitman, P.**, Conmy, R., Vandermeulen, R., Chuanmin, H., Mannino, A., & Salisbury, J. (In review). GLIMR potential in oil spill and water quality monitoring. *Journal of Geophysical Research*.
- 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 Algae*. DOI: 10.1016/j.hal.2022.102191.

## 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