Laura Logozzo, PhD

Post-doctoral Fellow, University of Lethbridge

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Education

PhD **Yale University, School of the Environment** Aug 2017-May 2023
Committee: Peter Raymond (Advisor), James Saiers, Timothy Eglinton, Benjamin Twining
Thesis: *"Dissolved Organic Matter Dynamics in a Large Temperate River"*

MS **CUNY City College, Department of Earth and Atmospheric Sciences (EAS)** Aug 2015-May 2017
Advisor: Maria Tzortziou
GPA: 4.0/4.0
Thesis: *"Microbial Degradation of Marsh-Exported Carbon"*

BS **Macaulay Honors College at CUNY City College, EAS** Aug 2011-May 2015
GPA: 3.838/4.0
Honors/awards: Summa cum laude, Ward medal (top grade point average) in Geology

Research Experience & Collaborations

University of Lethbridge, Department of Biological Sciences Lethbridge, AB, Canada (Hybrid)
Post-doctoral Fellow Dec 2022-*present*
Supervisor: Matthew Bogard

- Evaluate the effects of nutrient pollution on greenhouse gas emissions in 30+ wetlands, across 3 Canadian provinces, using modeling and long-term monitoring in collaboration with Ducks Unlimited Canada
- Use geographic information systems (GIS), water chemistry data, and eddy-covariance flux tower data to determine the impacts of wastewater effluent on the carbon storage potential of a restored wetland
- Lead the annual watershed water quality report for grant partners and industry and government stakeholders

Yale University, School of the Environment New Haven, CT
Doctoral Researcher/Principal Investigator Aug 2017-Nov 2022
Supervisor: Peter Raymond

- Designed and executed a two-year bi-weekly riverine carbon monitoring program spanning 133 miles of the Connecticut River (to the Long Island Sound)
- Managed shared equipment, sampling protocols, and data for a multi-institution collaborative project
- Received and managed 2 research grants as primary investigator

NSF Watershed Rules of Life Project New Haven, CT
Collaborator Aug 2019-Jun 2020
PI: Peter Raymond, Co-PIs: Byron Crump, Colin Gleason

- Led teams of 5-7 students and volunteers to conduct seasonal sampling for dissolved carbon, nutrients, microbial DNA/RNA, and greenhouse gas concentrations in the Connecticut River watershed

ETH Zürich, Department of Earth Sciences Zürich, Switzerland
Visiting Researcher May 2019
Supervisors: Timothy Eglinton, Peter Raymond

- Prepared dissolved organic carbon samples for radiocarbon measurement using wet chemical oxidation

Yale University School of the Environment New Haven, CT
Lab Technician Aug 2018-Oct 2020
Supervisor: James Saiers

- Measured groundwater samples for dissolved organic and inorganic carbon concentrations

Lab Manager Aug 2018-Mar 2020
Supervisor: Peter Raymond
- Managed lab supplies, procedures, and environmental health and safety protocols

U.S. Geological Survey (USGS), New England Water Science Center Hartford, CT
Volunteer & Collaborator Aug 2017-Dec 2019
Supervisor: Jon Morrison
- Calibrated, cleaned, and maintained water quality sondes at two USGS stream gauges

Smithsonian Environmental Research Center Edgewater, MD
Research Fellow Jun-Aug 2016
Supervisors: Patrick Neale, Patrick Megonigal, Maria Tzortziou
- Determined the bio- and photo-availability of dissolved organic carbon exported from tidal marshes using lab experiments and estuarine transect measurements

Research Intern Jun-Aug 2015
Supervisor: Patrick Neale
- Estimated dissolved organic and inorganic carbon lateral fluxes at a tidal marsh-estuary interface

City College of New York, Department of Earth and Atmospheric Sciences New York, NY
Undergraduate Research Assistant Jan 2014-May 2015
Supervisors: Pengfei Zhang, Stephanie DeVries
- Conducted soil lab experiments and bacterial culturing to determine the effects of antibiotics on nitrifying bacteria

Undergraduate Research Assistant May 2014-Apr 2015
Supervisors: Steven Kidder
- Estimated titanium concentrations in quartz using CL imagery, to inform whether titanium can be used as an indicator of the temperature and pressure at which quartz forms

University of New Hampshire & Abisko Naturvetenskapliga Station Durham, NH and Abisko, Sweden
Northern Ecosystems Research for Undergraduates (NERU) program Jun-Aug 2014
Supervisors: Ruth Varner, Joel Johnson
- Linked sediment characteristics to methane emissions in sub-arctic lakes and thaw ponds

Peer-Reviewed Publications

* Denotes mentee

Published/In Revision

11. Chan, C.N.*, Gushulak, C., Leavitt, P., **Logozzo, L.A.,** Finlay, K., Bogard, M.J. In Revision. *Whole-ecosystem experimental eutrophication causes contrasting effects on emissions of CO2, CH4, and N2O in agricultural ponds.* Environmental Science and Technology.
10. Zhou X., **Logozzo, L.A.,** Johnston, S.E., Zink, L., Bogard, M.J. In Revision. *Composition and bioreactivity of dissolved organic matter leachates from end members in a mountain to prairie transitional river valley.* Journal of Geophysical Research: Biogeosciences
9. **Logozzo, L.A.**, Hosen, J.D., McArthur, J.*, Raymond P.A. (2023) *Distinct drivers of two size fractions of operationally dissolved iron in a temperate river.* Limnology & Oceanography. doi: 10.1002/lno.12338
8. Maavara, T., Brinkerhoff, C., Hosen, J.D., Aho, K.S., **Logozzo, L.A.**, Saiers, J., Stubbins, A., Raymond, P.A. (2023) *Watershed DOC uptake occurs mostly in lakes in the summer and in rivers in the winter*. Limnology and Oceanography. doi: 10.1002/lno.12306
7. **Logozzo, L.A.**, Martin, J.W., McArthur, J.*, Raymond, P.A. (2022) *Contributions of Fe(III) to UV-vis absorbance in river water: A case study on the Connecticut River and argument for the systematic tandem measurement of Fe(III) and CDOM.* Biogeochemistry. doi: 10.1007/s10533-022-00937-5

6. Aho, K.S., Fair, J.H., Hosen, J.D., Kyzivat E.D., **Logozzo, L.A.**, Weber, L.C., Yoon, B., Zarnetske, J., Raymond, P.A. (2022) *An intense precipitation event causes a temperate forested drainage network to shift from N_2O source to sink.* Limnology and Oceanography. doi: 10.1002/lno.12006
5. Aho, K.S., Fair, J.H., Hosen, J.D., Kyzivat, E.D., **Logozzo, L.A.**, Rocher-Ros, G., Weber, L.C., Yoon, B., Raymond, P.A. (2021) *Distinct concentration-discharge dynamics in temperate streams and rivers: CO_2 exhibits chemostasis while CH_4 exhibits source limitation due to temperature control.* Limnology and Oceanography. doi: 10.1002/lno.11906
4. Maavara, T., **Logozzo L.A.**, Stubbins, A., Aho, K.S., Brinkerhoff, C., Hosen, J.D., Raymond, P.A. (2021) *Does photomineralization of dissolved organics matter in temperate rivers?*. Journal of Geophysical Research: Biogeosciences. doi: 10.1029/2021JG006402
3. Aho, K.S., Hosen J.D., **Logozzo L.A.**, McGillis, W.R., Raymond, P.A. (2021) *Highest rates of gross primary productivity maintained despite CO_2 depletion in a temperate river network.* Limnology & Oceanography Letters. doi: 10.1002/lol2.10195
2. **Logozzo, L.A.**, Tzortziou, M., Neale, P. Clark, B. (2021) *Photochemical and microbial degradation of chromophoric dissolved organic matter exported from tidal marshes.* Journal of Geophysical Research: Biogeosciences. doi: 10.1029/2020JG005744
1. DeVries, S., Loving, M., **Logozzo, L.A.**, Zhang, P., Block, K. (2020) *The Effects of Trace Narasin on the Biogeochemical N-Cycle in a Cultivated Sandy Loam.* Science of the Total Environment. doi: 10.1016/j.scitotenv.2020.137031

In prep
4. **Logozzo, L.A.**, Eglinton, T., Haghipour, N., Maavara, T., Aho, K.S., Hosen, J.D., Raymond, P.A. In prep. *Tracing the radiocarbon bomb-pulse from the atmosphere to riverine dissolved organic carbon.* Target Journal: Ecosystems
3. **Logozzo, L.A.,** Soued, C., Badiou, P., Bortolotti, L., Page, B., Kowal, P., Kalyn, H., Bogard, M.J. In prep. *Do different agricultural land use regimes alter the cycling of CO_2, CH_4, and N_2O in wetlands of the Canadian Prairie Pothole Region?* Target journal: Global Biogeochemical Cycles

Reports

1. **Logozzo, L.A.**, Bogard, M.J., Tilley M., Flanagan, L.B. (2023) *Frank Lake and Little Bow River Water Quality Report.*

Invited Talks

6. Logozzo, L.A., Soued, C., Badiou, P., Bortolotti, L., Page, B., Kowal, P., Kalyn, H., Bogard, M.J. (expected Jan 2024) *Do different agricultural land-use regimes alter the cycling of CO_2, CH_4, and N_2O in wetlands of the Canadian Prairie Pothole Region?* Webinar. Ducks Unlimited. Virtual.
5. Logozzo, L.A. (2023) *Dissolved organic matter dynamics in a large temperate river*. Invited Talk. Water Institute of Sustainable Environments Seminar Series. Lethbridge, AB, Canada.
4. Logozzo, L.A. (2023) *Do different agricultural land use regimes alter the cycling of CO_2, CH_4, and N_2O in wetlands of the Canadian Prairie Pothole Region?* Invited Talk. ECCC-CAAF Research Team Annual Meeting. Zoom.
3. Logozzo, L.A. (2021) *Dissolved organic carbon and iron dynamics in the Connecticut River.* Invited Talk. YSE First Year Doctoral Seminar. New Haven, CT, USA
2. Logozzo, L.A. (2021) *The mobilization of aged dissolved organic carbon in a large temperate river.* Invited Talk. ETH Zürich, LIP AMS Seminar. Zoom.
1. Logozzo, L.A. (2021) *Dissolved organic carbon cycling in rivers and estuaries.* Invited Talk. CUNY City College, Earth and Environmental Sciences Seminar. Zoom.

Conference Presentations (First Author Only)

12. Logozzo, L.A., Woodman, S.G., Bain, H.D., Fernando, W.O.K., Flanagan, L.B., Bogard, M.J. (2023) *Using a whole ecosystem budget to explore whether effluent release shifts a model restored wetland from a net carbon sink to source.* Talk. AGU Fall Meeting. San Francisco, CA, USA.
11. Logozzo, L.A., Soued, C., Badiou, P., Bortolotti, L., Page, B., Kowal, P., Kalyn, H., Bogard, M.J. (2023) *Do different agricultural land-use regimes alter the cycling of CO_2, CH_4, and N_2O in wetlands of the Canadian Prairie Pothole Region?* Talk. Society of Canadian Aquatic Sciences. Montreal, QC, Canada.

10. Logozzo, L.A., Martin, J.W., McArthur, J., Raymond, P.A. (2022). *Fe(III) Contributions to UV-vis Absorbance in the Connecticut River Watershed: an Argument for the Tandem Measurement of CDOM and Fe(III).* Talk. Joint Aquatic Sciences Meeting. Grand Rapids, MI, USA.
9. Logozzo, L.A., Raymond, P.A. (2021). *The mobilization of aged dissolved organic carbon in the Connecticut River.* Poster. YSE Climate Day. Zoom.
8. Logozzo, L.A., Raymond, P.A. (2020) *Seasonal variability in dissolved iron and dissolved organic matter in the Connecticut River.* Talk. YSE Research Conference. Zoom.
7. Logozzo, L.A., Raymond, P.A. (2019) *The Coupled Cycling of Dissolved Iron and Dissolved Organic Matter in the Connecticut River.* Poster. YSE Research Conference. New Haven, CT, USA. ***Best poster award winner.***
6. Logozzo, L.A., Raymond, P.A. (2019) *The Coupled Cycling of Dissolved Iron and Dissolved Organic Matter in the Connecticut River.* Talk. ASLO Aquatic Sciences Meeting. San Juan, Puerto Rico.
5. Logozzo, L.A., Tzortziou, M., Neale, P. (2017) *Dissolved Organic Matter Fate in Estuaries: Spatial Variations in Bioavailability and Photoreactivity.* Poster. ASLO Aquatic Sciences Meeting. Honolulu, HI, USA.
4. Logozzo, L.A., Neale, P., Tzortziou, M., Nelson, N., Megonigal, P. (2016) *Tidal Marshes as Pulsing Systems: New Estimates of Marsh-Carbon Export and Fate.* Talk. AGU Ocean Sciences Meeting. New Orleans, LA, USA.
3. Logozzo, L.A., Kidder, S. (2015) *A model for mapping titanium concentrations in quartz using blue-wavelength cathodoluminescence and c-axis plunge.* Poster. Jeffrey Steiner Memorial Symposium. New York, NY, USA.
2. Logozzo, L.A., Devries, S., Zhang, P. (2015) *The effects of antibiotics on the nitrifying bacteria Alcaligenes faecalis.* Poster. Jeffrey Steiner Memorial Symposium. New York, NY, USA. ***Best poster award winner.***
1. Logozzo, L.A., Perry A., Wik, M., Thornton, B., Crill, P., Johnson, J., Varner, R. (2014) *Linking Sediment Characteristics to Methane Emission Potential in Subarctic Lakes.* Poster. AGU Fall Meeting. San Francisco, CA, USA

Workshop Participation

"Wetlands as Nature-Based Climate Change Solutions," ECCC-CAAF funded project	May 2023
Highwood Little Bow River Management Plan – Public Advisory Committee	Mar 2023

Fellowships & Grants

University of Lethbridge Postdoctoral Fellow Dissemination Grant	$1000 CAD	2023
Society of Canadian Aquatic Sciences Early Career Travel Award	$150 CAD	2023
Yale Graduate Student Assembly Conference Travel Fund Award	$750 USD	2022
NASA Connecticut Space Grant Graduate Research Fellowship	$8000 USD	2019
"Illuminating riverine dissolved organic carbon dynamics and export using carbon age"		
Yale Graduate Student Assembly Conference Travel Fund Award	$500	2019
Yale Institute of Biospheric Studies RFP Grant	$3950 USD	2018
ASLO Aquatic Sciences Meeting Student Travel Fund	$500 USD	2017
Smithsonian Graduate Student Fellowship	$8000 USD	2016
"Microbial degradation of marsh-exported carbon"		
NOAA-CREST Graduate Student Fellowship	$36,000 USD	2015-2017

Teaching & Mentoring

Mentorship of:

- Jessica Dowling (BSc) — Sep 2023-*present*
- Sara Valizadeh (PhD) — Jun 2023-*present*
- Ilyanna Janvier (MSc) — Dec 2022-*present*
- Mariya Denny (MSc) — Dec 2022-*present*
- Chun Ngai Chan (PhD) — Dec 2022-*present*
- Johnae McArthur (BSc) | New Haven Promise Internship — Jun-Aug 2018
- Jocelyn Mendez (BSc) | Smithsonian Internship Program — Jun-Aug 2016

Teaching Fellow (*Yale University*):

- The Physical Science of Climate Change — Spring 2021
- Watershed Cycles and Processes — Fall 2019 & Fall 2020
- Multivariate Statistics for the Environmental Sciences — Spring 2019

Workshops:

- *"Publication-Ready Figure Making using R ggplot2"* Laura Logozzo and Sam Woodman (2023) Water Institute for Sustainable Environments Seminar Series, University of Lethbridge
- *"Microsoft Excel Basics"* Laura Logozzo (2020) Watershed Cycles and Processes, Yale University. Primary Instructors: Peter Raymond and James Saiers

Guest Lecturing:

- *"Biogeochemistry of Inland Waters II"* (Fall 2023) Biogeochemistry, University of Lethbridge. Primary Instructor: Matthew Bogard

Professional Service & Volunteering

Reviewer for*:*

Water Research	2023-*present*
Limnology and Oceanography	2023-*present*
Journal of Geophysical Research: Global Biogeochemical Cycles	2023-*present*
Biogeosciences	2022-*present*
Biogeochemistry	2021-*present*
Hydrological Processes	2021-*present*
Global Biogeochemical Cycles	2020-*present*
Water Institute for Sustainable Environments Seminar Series, **Co-organizer**	Oct 2023-*present*
Meeting of the Minds Conference, University of Lethbridge, **Poster Presentation Judge**	March 2023
Yale Graduate Student Health Advisory Committee, **Member**	2019-2021
Yale Graduate Student Assembly Representative, **Elected Member**	2019-2021
YSE Student Affairs Committee Member, Student Life Division, **Member**	2018-2019
YSE PhD Student Interest Group, **Co-chair**	2018-2019

Grant & Award Reviewing

University of Lethbridge Graduate Scholarships Adjudication Committee	August 2023
MITACS Accelerate Research Proposal	April 2023

Professional Affiliations

American Geophysical Union
Association for the Sciences of Limnology and Oceanography
Society of Canadian Aquatic Sciences

Press

"Exploring the Depths of Water's Role in Climate Change" (2022) *Canopy Magazine*
"New Haven Promise Inspires New 'Champions' for the Environment" (2018) *Yale School of the Environment*