

Matthew Watkins

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Education

MSc Environmental & Life Sciences
Trent University, Peterborough, ON

Jan. 2024

BSc Physical Geography
Simon Fraser University, Burnaby, B.C.

May 2018

Experience

JD Mollard & Associates

May 2024 – Present

Geoscientist-in-Training

- Conducted numerous EM31 geophysical surveys to assess aggregate potential and monitor decommissioned oil wells across southern Saskatchewan
- Georeferenced well pads and produced gradient point maps of aggregate potential in ArcGIS Pro
- Interpreted results and wrote technical reports for landowners and environmental clients

Trent University

Sept. 2020 – Apr. 2022

Graduate Teaching Assistant

- Prepared and gave weekly briefings to groups of 25 students; marked assignments and exams
- Answered student questions and provided help through Zoom and email

Trent University

May 2020 – Aug. 2020

Research Assistant

- Analysed ice, streamflow (tidyhydat) and climate data to examine if peak flows for numerous watersheds east of Lake Superior were shifting temporally
- Created seasonal climate (temperature and precipitation) summaries via random point generation for each watershed

Simon Fraser University

Nov. 2019 – Apr. 2020

Open Education Research Assistant

- Refined 14 module resources for an introductory course in Physical Geography that have been used successfully for three semesters
- Worked in co-operation with the Teaching and Learning Centre to research and compile engaging and impactful open-source multimedia resources
- Utilised Microsoft Word, Google Drive and Zotero to edit, script and organize media, materials, definitions and references into an online-textbook platform

Douglas College

Aug. 2019 – Nov. 2019

Volcanology Research Assistant

- Performed water quality sampling for pH, temperature and dissolved solids at multiple hot springs
- Analysed lab data and created a foundational time-series dataset to monitor water geochemistry

Douglas College

Apr. 2019 – Jul. 2019

Insect Ecology Research Assistant

- Conducted multiple ground surveys for a habitat assessment project involving at-risk beetle species
- Identified salt marsh plant species associated with beetle habitat and completed quadrat sampling
- My work on *Omus audouini* was included and presented at the CSEE, ESC, & AES 2019 Joint Meeting
- Assisted Dr. McGregor with microscope-based beetle identification in weekly lab sessions

City of Surrey

May 2016 – Dec. 2018

Engineering Labourer

- Inspected odour control units and monitored a network of 50 sanitary, drainage and water stations
- Operated five-ton trucks in an unsupervised environment
- Trained new student hires and led group fieldwork for two years
- Interacted with the public on a daily basis and helped resolve complaints

Additional Skills

- Aggregate mapping and exploration
- Hydrological study design and sample network monitoring in remote areas
- Rating curve development and mass flux estimation
- Data analysis (ArcGIS Pro, R, Python)
- HTML, CSS, and Javascript – built my own website
- Markdown, YAML
- Microsoft Office 365
- Adobe Creative Suite
- Video editing (DaVinci Resolve)

Licenses and Certifications

- Standard First Aid (CPR-C & AED)
- RPAL/PAL
- Swift Water Awareness Level 1
- Class 5 License
- WHMIS/SDS
- Ground Disturbance 201
- ATV Training Course

Membership

Professional Geoscientists of Ontario

Dec. 2020 – Present

Geoscientist-in-Training

Extracurricular

SFU Ban the Bottle

Nov. 2019 – Apr. 2020

Member

- An initiative supported by the Pacific Water Research Centre that aims to stop the sale of plastic water bottles on campus

Nature Work Parties

Feb. 2019 – Sept. 2020

Volunteer

- Enhanced and maintained Surrey parks by removing invasive plants species, planting native trees and cleaning up waste