

Nipissing University
JOB DESCRIPTION

JOB TITLE: Trace Metal Analytical Intern

DEPARTMENT: Department of Biology, Chemistry, & Geography

EMPLOYMENT DEFINITION: Full-Time Contract (1 Year)

SUPERVISOR: Dr. Colin McCarter

SUMMARY OF FUNCTIONS:

The Mercury and Ecohydrology Research Laboratory (MERL) at Nipissing University is seeking a Mercury Research Intern for a one-year contract. The successful candidate will play a leading role in MERL under the supervision of Dr. McCarter. They will contribute to Dr. McCarter's Canada Research Chair and related research, focusing on contaminant transport, mercury biogeochemistry, and restoration of contaminated peatlands in both laboratory and field settings. The role is a mix of laboratory and field research work.

This opportunity is proudly supported by Northern Ontario Heritage Fund Corporation and is funded through the Workforce Development Program.

Eligibility requirements of the program can be found here: <https://nohfc.ca/en/pages/programs/people-talent-program/workforce-development-stream>

DUTIES AND RESPONSIBILITIES:

- Report all action plans for laboratory analysis to the Laboratory Facilitator and/or Dr. Colin McCarter.
- Field collection of trace metal water, soil, and/or biological tissue samples following strict trace metal sampling protocols
- Laboratory analysis of trace concentrations of mercury in water, soil, and biological tissue
- Maintenance and operation of specialized mercury analytical equipment (Tekran 2600 & 2700)
- Laboratory analysis of standard water quality parameters using Ion Chromatography
- Perform and ensure all QA/QC protocols are followed and target metrics are achieved
- Guidance of graduate and undergraduate students performing mercury and Ion Chromatography sampling and laboratory analysis
- Management of multifaceted and interdisciplinary research data
- Prepares and maintains manuals of standard operating procedures for relevant lab techniques
- Train new lab personnel to use specific equipment and in the performance of various laboratory procedures, as required
- Sources lab supplies, consumables, or recommend and provide cost-effective alternatives for relevant projects
- Prepare and verify laboratory safety reports and participates in safety inspections
- Ensure that all SDS sheets are in order, and chemical inventory lists are up-to-date

QUALIFICATIONS:

Education: An undergraduate degree in geography, chemistry, biology, environmental sciences, earth sciences, engineering, or related discipline. Possible fields of study could include, but are not limited to

geochemistry, biogeochemistry, hydrochemistry, hydrology, ecological restoration. An MSc or equivalent would be considered an asset.

Training, Experience, Knowledge & Skills Required:

- Experience in writing and producing diverse publications and other communication deliverables
- Experience with designing, testing and validating data collection protocols, tools and instruments
- Strong organizational, analytical and problem-solving skills
- Strong writing, editing, and proofreading skills for content in a range of styles
- Ability to respond to unexpected events when running experiments or field work
- Ability to work independently and within a team environment
- Valid G class driver's license

To be eligible for an NOHFC internship, candidates must:

- Be a new entrant into the workforce, transitioning to a new career, or unemployed/underemployed and entering a new field;
- Have not previously participated in an NOHFC-funded internship;
- Be at least 18 years of age; and
- Reside, and be legally entitled to work, in Canada.

RELATIONSHIPS/CONTACTS:

Supervised by: Dr. Colin McCarter

Positions supervised: Undergraduate and graduate researchers

Internal Contacts: Staff, students, faculty

MATERIALS UTILIZED:

- Computers, software (MS Office Suite, R Statistical Software or similar, Loggernet, etc.)
- Geographic Information Systems
- Field equipment (YSI water probes, pressure transducers, stream velocity meters, soil moisture probes, etc.)
- Common environmental chemistry laboratory materials

PHYSICAL/MENTAL DEMANDS & WORKING CONDITIONS

- Laboratory: basic laboratory work with fume hoods, analytical equipment, toxic/harmful chemicals
- Field: Outdoors in most weather. Rough terrain in forested uplands, as well as wetlands.

I have read my position description and it has been reviewed with my supervisor. I understand what my duties and functions are, and I will carry out all my responsibilities as herein described.

Employee Name (please print)

Employee Signature

Date

Supervisor

Date

Human Resources

Date