

Agency of Natural Resources

Intern Position Description

Internship Title: Limnology Field Assistant and GIS Intern

Internship Site: National Life Campus, Montpelier, VT

Description: The intern will assist with the Lake Assessment monitoring program, which is active April through August. In the spring lakes typically 'turn over' and the water column becomes well mixed. This is an advantageous time to sample lake nutrients and chemistry. Each year since 1977, between 40 and 110 lakes throughout the state are sampled during spring turnover. The intern will learn to use Secchi discs, Hydrolab multiprobes and Kemmerer water samplers to make a variety of chemical and biological measurements at the deepest place in each lake. They will record observations of lakeshore disturbance at 10 randomly selected sites evenly spaced around the lakeshore. In June, the intern will assist in the maintenance and repair of equipment used and will work on entering data collected. In addition, the intern will create GIS maps that show the distributions and relative abundances of macrophyte species in a variety of Vermont lakes. This will require use of both ArcGIS and Microsoft Access. Results from this effort will be used in the development of macrophyte biocriteria. In July and August, a time when the aquatic plant community has become established and lakes are typically stratified, the intern will assist with comprehensive summer lake assessment, littoral habitat and macrophyte sampling efforts. In addition to most of the parameters made in the spring, the intern will also learn how to take sediment diatom and macroinvertebrate samples and additional habitat, macrophyte and water quality measurements. Interns will leave this internship with a well-rounded understanding of the limnological principles and sampling methods used by lake scientists.

Desired qualifications/skills/coursework: The successful candidate must be comfortable working long hours traveling to lakes throughout Vermont and sampling from inflatable rafts, canoes, and small motorboats in all kinds of weather. Applicants should be able to carry a heavy pack or canoe to get to lakes that are only accessible via hiking trail or bushwack. Applicants should be able to swim and be comfortable working from a boat under occasionally rough conditions. Some sampling efforts will require staying overnight depending on where in the state the lakes to be sampled are located. An understanding of basic limnology would be helpful as would experience with databases. Experience using ArcGIS is a must and familiarity with Microsoft Access a plus.

Supervision: Leslie Matthews, will be the primary supervisor. The intern may occasionally work with others in the Lakes Program.

Start and End Dates: *May through August 2016 (exact start/end dates are negotiable)*

Total Hours: *200 -240 hours (20 hours/week for 10-12 weeks)*

Compensation: *\$2,500- 3,000*

How to apply: Submit a resume, cover letter and an academic reference (professor name and contact information) to Dr. Perry Thomas (perry.thomas@vermont.gov) by April 18, 2016.