

Rubenstein School of Environment and Natural Resources

University of Vermont

Perennial Summer Internship Program - 2021

Internship Title: Lake Fairlee Health – Phosphate and Biologic changes

Internship Site: Lake Fairlee, Thetford, Vermont

Description: Question: Why are phosphate levels in Lake Fairlee increasing and what impact is this change having on the lake environment?

Plan: The perennial intern will join a team of local volunteers and VDEC (Vermont Dept. of Environmental Conservation) staff who began a project to study Lake Fairlee water quality in 2019. The focus of the project will be a second year analyzing phosphate levels in the tributaries and lakebed of Lake Fairlee. The pilot study data indicates a need for more detailed and comprehensive methods of study. Related ancillary studies will be: 1) a survey of four species of plants and animals that may index losses of diversity. 2) continued participation in the VDEC cyanobacteria monitoring program, combined with tracking over the summer two (non toxic) blue-green algae species endemic to the lake 3) participation in the “Lake Wise” project that is educating property owners about the human activity that can contribute to phosphate excess 4) participation in the combined planning for a future “Nature Study Program” by the Thetford Treasure Island town recreation committee, Lake Fairlee Association (LFA), Aloha foundation camps, and the Vermont Center for Eco-studies 5) possibly writing for the LFA online blog, and perhaps assisting in the production of an educational video for lakeshore residents about the issues above. One or more of these ancillary projects will be chosen by the student, and will involve at least half of the intern’s time.

The weekly activities of the intern will mix field research in and around Lake Fairlee; joining various groups for planning and documentation; providing education to local residents, campers and counsellors; and researching information from both published data and environmental science experts.

(Quick sites to become familiar with the issues)

<https://dec.vermont.gov/watershed/lakes-ponds/data-maps/scorecard>

<https://www.emcenter.org/wp-content/uploads/2013/02/Agriculture-Phosphorus-and-Water-Quality-in-Vermont.pdf>

<https://www.healthvermont.gov/tracking/cyanobacteria-tracker>

http://blog.lakefairlee.org/?page_id=87

Desired qualifications/skills/coursework:

The student should come with tested and effective communication skills (Listening, Asking, and Explaining; then Writing,) and experience with media-based presentation. The student needs to have an inquisitive mind and the initiative to actively seek out answers on a daily basis. In a contractual manner, she or he should regularly seek feedback from supervisors, mentors, and associates.

Because of the nature of the fieldwork, it will help if the student has boating and snorkeling skills, and a keen willingness to get one’s feet wet.

Some quantitative skills and familiarity with common software such as Microsoft Excel, Access (database functionality) and PowerPoint (presentation and poster development) are helpful for working with data and

communicating results. Familiarity with social media is also a plus.

The candidate should have had coursework related to the basic questions we are asking and some experience in field navigation and orienteering, map use, and making species identification. However, it is expected that the student will acquire further needed skills and a specialized information base during the internship.

The “ancillary projects” will require the intern to be a self-starter and an independent worker.

Note: The Lake Fairlee location and needs of the project will require a car. Local housing in the three surrounding towns can be facilitated by the Lake Fairlee Association with enough notice.

Rubenstein students currently in their sophomore and junior years are eligible to apply. Seniors graduating in May 2021 are not eligible to apply. Earning Independent Study or Internship credit through the Rubenstein Internship Program is required. Due to possible restrictions related to the ongoing COVID-19 pandemic, Perennial Internships may happen as described, be modified or canceled.

Supervision:

Dale Gephart MD Currently: Chair of the Water Quality Action Committee, Lake Fairlee Association and “Lake Steward”– Lake Fairlee. Formerly: a Dartmouth College and Medical School faculty member, with many years of mentoring students.

Local Advisors

Nathaniel Sharp – Vermont Center for Eco-studies; RSENR grad

Ella Chapman – Upper Valley Land Trust

Tig Tillinghast –Vice Chair, Vermont Institute of Natural Science

Lisa Niccolai –White River Conservation District – “Lake Wise”

Other Advisors / mentors

Ana M. Morales-Williams, Assistant Professor, RSENR <https://www.vermontlimnology.com>

Oliver Pierson, Lakes and Ponds Program Manager, VDEC

Start and End Dates: Mid-May – Mid-August, 2021 (exact start/end dates are negotiable)

Total Hours: 20 hours/week, 12 weeks; up to 40 hours/week is negotiable

Compensation: \$13/hour

How to apply: Step-by-step instructions. Please follow them closely.

- 1) Click the following link to view the Rubenstein Perennial Internship Descriptions in Handshake:
<https://uvm.joinhandshake.com/employers/226837>
 - a) If asked to log in: click “UVM Net ID Login” & login.
 - b) Click the Favorite button to enable easier searches in the future.
- 2) Click “View All Jobs” in Jobs at Rubenstein Perennial Internship Program box on right side of page.
- 3) You should now see the great Perennial internship opportunities! Click “View Details” to learn more about each position.
 - a) Please do take the time to carefully read each individual description so that you don’t miss a great opportunity by judging an internship solely on its title.

- b) You may apply for up to **three** Perennial Internships.
 - c) All applications are due by 11:59pm, Wednesday, February 17th, 2021.
- 4) You'll need to upload both required documents in Handshake before you can apply for any Perennial Internship:
- a) Click on your name at top right of screen in Handshake
 - b) Select Documents.
- 5) Please upload documents as pdfs. The following are required documents:
- a) Resume
 - b) Cover Letter
 - i) You should write and upload unique cover letters for each position to which you are applying.
 - ii) In your cover letter, provide name & contact information for at least one professional reference. This could be someone who supervised you in a past work/internship/volunteer position, a professor or teacher, etc. The person listed should **not** be the person also completing your recommendation form.
- 6) In addition to the documents listed above, a [recommendation form](#) will need to be completed by a Rubenstein faculty, graduate student or staff member of your choosing.
- a) When you ask your recommender if they are willing to complete the form to support your application, please provide your recommender this [link to the recommendation form](#)
 - b) Only one recommendation form needs to be completed regardless of how many Perennial Internships you are applying for.
 - c) Your recommender will complete & submit this form online and then your recommendation will be confidentially added to your application(s). This [recommendation form](#) needs to be submitted by the February 17th deadline.
- 7) Make sure that your resume and cover letter(s) are as strong as they can be! Utilize the resources around you:
- a) The Rubenstein Stewards are great at reviewing resumes/cover letters and providing helpful feedback. Email the Stewards to schedule an appointment after the start of the semester: RSENStewards@uvm.edu
 - b) Get your resume and cover letter reviewed by a Career Counselor at the Career Center. [You can learn more here about how to schedule an appointment.](#)
 - c) Sign up for a resume/cover letter review appointment with Anna Smiles-Becker (Rubenstein Career Counselor & Internship Coordinator) using [Navigate](#).
- 8) If you are selected to interview for a Perennial Internship, you will be contacted by the site to set up an interview during early-mid March.