

Aquatic Ecology – Habitat Mapping Internship (Summer 2017)

The intern will enable the creation of lake habitat maps by developing methods for using existing sonar and GPS data that will enable the creation of bathymetric and habitat maps. Data have already been collected for the intern to work with and some resources are available to start building a data analysis process. The intern's task would be to explore the literature, develop potential options, and pursue workable strategies. This project has the potential to be very rewarding as it focuses on a novel application leading to the potential for a publication or internal white paper. However, it could also be very challenging as it does focus on novel applications of technology within freshwater environments.

The ideal candidate would be willing to read scientific literature from across fields (freshwater bathymetry, oceanography) and popular or commercial writing on fishing-related sonar techniques. The candidate should also know or be willing to learn R coding and spend most of their time at the computer. There is a potential for day trips to test out alternative methods and/or hardware with an aquatics team member.

Reports and Presentations:

- Generate maps and prepare metadata, data processing summaries and other supporting documentation as appropriate for inclusion in NEON lake habitat maps.
- Document data processing methods in a clear and concise way for data users.
- Present project status to NEON mentor, departmental team and peers for feedback periodically throughout the summer.
- Prepare brief report describing project outcomes.
- Present technical poster showcasing internship project to NEON team and to peers at final Intern Poster Session at end of the summer program.

Seminars and Departmental Meetings

Participate in technical and career seminars and meetings with NEON science staff, NEON Internship program staff, and peers.

Community and Professional Behavior

Interns are part of a diverse community of peers working and living together. Interns are expected to contribute positively to the community and to conduct themselves in a manner appropriate to a professional environment. Interns are also expected to fully participate during normal office hours and during NEON Internship functions.

Decision Making and Problem Solving

Interns will use basic problem solving skills in their work, will exercise judgment regarding when to ask for help, and will consult with their supervisor or mentor on larger job or community related issues.

Education and Experience

Required

Currently enrolled in a community college or undergraduate environmental science, biology, marine biology, civil/environmental engineering, or ecology program. Must have at least one semester of aquatic ecology (e.g., limnology, fisheries, oceanography, or stream ecology) that includes exposure to the concepts of aquatic habitat for organisms or equivalent experience through fishing or fisheries-related work. Must have a least one semester of undergraduate education remaining after the summer program.

Desired (but not required)

Preference for students with experience working with field sonar and GPS data collection and post-processing methods. Scripting or programming skills (e.g., R, Matlab, or Python) are a plus.

Knowledge/Skills/Abilities

- Basic knowledge, through coursework, of ecology and aquatic ecosystems.
- Ability and willingness to learn and use GIS tools.
- Ability to work independently, and with a diverse group of individuals.
- Skill in the use of software for communication purposes (e.g., Word, PowerPoint, Excel).
- Basic problem solving skills.
- Good oral and written communication skills.
- Ability to work full-time in Boulder, CO during the summer program.
- Ability to interact with mentors and peers in a manner that supports collaboration and inquiry.
- Ability and willingness to work within guidelines and policies of the organization and assigned work groups.

Other Requirements

You must have permanent authorization for US employment. Battelle Ecology, Inc. will not provide any kind of visa sponsorship