



## **Master's position in the Larson Lab using genomics to study connectivity and species diversity in the Boardman River, MI**

**Description and responsibilities:** The USGS Wisconsin Cooperative Fishery Research Unit at UW-Stevens Point is looking for a MS student to conduct genomics research on fish populations from the Boardman River near Traverse City, MI. This research is part of the FishPass project, a large collaborative effort to explore fish passage solutions that restore connectivity for native species while blocking invasive species, such as sea lamprey. The Union Street dam on the Boardman River is 150 years old, and fish populations below the dam have been isolated from above dam populations since its completion. The successful candidate will use restriction site-associated (RAD) sequencing to collect genetic data on five fish species sampled above and below the Union Street Dam to determine if these populations are significantly differentiated and/or show differences in diversity. Additionally, the student will collect eDNA samples from existing monitoring sites and pair these data with traditional surveys to determine the utility of eDNA metabarcoding for investigating species diversity and distribution patterns in this system. Many of the samples for this project are being collected by the Michigan Department of Natural Resources and other local agencies therefore fieldwork will be minimal. However, the student will likely be asked to help with sample collection one to two times per summer. Laboratory work will consist of constructing RAD and amplicon sequencing libraries to send out for high-throughput sequencing. Bioinformatic analysis will involve using programs such as STACKS to analyze RAD data and working with Linux based pipelines to analyze eDNA data.

**Qualifications:** B.S. in biology, fisheries, or a related field, GPA of 3.0+, and GRE of 300+. Background in genetics is preferred but not required. Previous experience with fieldwork and analysis of genomic data is desirable.

**Salary:** \$16,000 per year (2 yr) plus health insurance and tuition waiver.

**Closing date:** March 1, 2018.

**Starting date:** Position will start in September 2018 but there may be an opportunity to work in the Larson Lab during summer 2018 before the position starts.

**Contact:** Please send CV, transcript copies, GRE scores, and names and contact information for 3 references to Wes Larson (Wes.Larson@uwsp.edu).

### **Web Links:**

<https://larsonlab.wordpress.com/>

[https://www.coopunits.org/Wisconsin\\_Fish/People/Wes\\_Larson/index.html](https://www.coopunits.org/Wisconsin_Fish/People/Wes_Larson/index.html)

<http://www.glfc.org/fishpass.php>