**PROJECT TITLE: Winter Dynamics of Vulnerable Trout Streams: Central Minnesota**

**Project Manager and Collaborator Qualifications**

**Leonard C. Ferrington Jr.** has maintained an active research program dealing with responses of aquatic invertebrates to water quality conditions for 38 years, and is a specialist in the ecology, taxonomy and systematics of aquatic insects, with a focus on cold-adapted aquatic insects active in winter. He is a professor in the Department of Entomology at the University of Minnesota (2000-2019) and served for six years as co-director of the Environmental Sciences, Policy & Management undergraduate degree program in the College of Foods, Agricultural and Natural Resources Sciences. He presently is a track coordinator for this same degree program. He has been PI or Co-Pi on more than 5.1 million dollars of grant-funded research projects, with funding from the NSF, USGS, National Park Service, US EPA, US Department of Energy, Minnesota SeaGrants, MN LCCMR, and various private contract labs involved in environmental monitoring and assessment. He has published 107 peer-reviewed journal articles and 40 technical articles. He has contributed chapters to three editions of the Aquatic Insects of North America (the primary identification text for aquatic insects in North America) and wrote two sections in “*Freshwater Animal Diversity Assessment”* (Hydrobiology 198, 2008), which was a collective effort of 163 experts commissioned by the European Union International Convention on Biological Diversity and funded by DIVERSITAS. Len will serve as project PI and be responsible for overall project management, and will supervise day-to-day duties of personnel related to Activity 1.

<http://midge.cfans.umn.edu/current-fellows/ferrington>

**Rebecca Swenson** is an Assistant Professor in the Agricultural Education, Communication & Marketing program within the Department of Applied Economics. Her research is related to education, outreach, assessment and communication, and she specializes in public and social media as platforms for science education and communication. She has published numerous articles in research and trade journals, and will interact with stake holder groups related to the topic of trout stream management and recreational use, including public attitudes and morés. Rebecca will participate as a Co-PI and supervise day-to-day duties of our new research team members, co-operating investigators Troy McKay and Garrett Steede, and other personnel related to Activity 3. <https://ag-ed.cfans.umn.edu/about/people/rebecca-swenson>

**Amy Schrank** is an Adjunct Assistant Professor in the Department of Fisheries, Wildlife and Conservation Biology. Her formal graduate training is as aquatic ecologist. Her research skills and active projects are related to 1) fish movement patterns and community dynamics, 2) aquatic terrestrial links, and 3) the effects of human impacts on aquatic systems. She has previously focused on movement patterns in inland cutthroat trout (*Oncorhynchus clarki* *utah*), and contributed to formulating management and conservation recommendations. Amy will participate as a Co-PI and supervise day-to-day duties of personnel related to Activity 2.

<https://fwcb.cfans.umn.edu/personnel/amy-schrank>

**ORGANIZATION DESCRIPTION:** All Co-PI’s and collaborators are members of the College of Foods, Agricultural and Natural Resources Sciences (CFANS) at the University of Minnesota, and have sufficient office and lab space to successfully complete the tasks and objectives proposed for this research project. In addition, they have all necessary field and laboratory equipment for field collection and lab-processing of field samples.