**Project Manager Qualifications and Organization Description**

**Laure Charleux (PI):** Dr. Charleux is an Associate Professor in the College of Liberal Arts at the University of Minnesota Duluth. She specializes in Geographical Information Science (GIS) and data science. Dr. Charleux has completed several applied research projects with community partners and has experience delivering actionable results. She will be in charge of overall project management. She has been mentoring the GIS work of **Ellen Cooney**, GIS certificate student and PhD candidate in Water Resource Management under the direction of **Elizabeth Minor** (co-I), Professor at the Department of Chemistry & Biochemistry at UMD and at the Large Lakes Observatory. Cooney and Minor have already published a basic research article (see ref. below) that prefigures some of the methods that will be used in the current proposal. Cooney is expected to be the main graduate research assistant on the project. Minor has managed several field-intensive water-sampling research projects funded by the National Science Foundation, MN Sea Grant and other funding agencies and was a researcher in previous ENRTF funded work on Lake Superior. She will oversee the water sampling and in situ sensor work for this project. **Marte Kitson** has been leading scientific outreach, communication, and education initiatives specifically in the aquatic sciences through her appointment at Minnesota SeaGrant since 2010 and will coordinate our wide outreach efforts. **Kris Johnson**, GIS instructor at UMD, has extensive experience in shaping web-GIS products for clients and was recently involved in the development of the Minnesota Natural Resource Atlas at NRRI.

The Large Lakes Observatory has the necessary instrumentation for nutrient, TSS, and other analyses proposed here and the RV Blue Heron, an 86-foot research vessel managed by the University of Minnesota Duluth, has the appropriate sampling and sensing gear. The Geospatial Analysis Center provides GIS expertise and research support to the UMD community. They will provide our computing needs and host our web-GIS.

Cooney, E. M., McKinney, P., Sterner, R., Small, G. E., & Minor, E. C. (2018). Tale of Two Storms: Impact of Extreme Rain Events on the Biogeochemistry of Lake Superior. *Journal of geophysical research. Biogeosciences*, *123*(5), 1719-1731.