Critical Insights from Historical Lake Water Quality Data

**Project Manager Qualifications and Organization Description**

**Jeffrey Peterson, PhD.**

**Project PI; Professor and Director of the University of Minnesota’s Water Resources Center.**

The Water Resources Center (WRC; [wrc.umn.edu](http://www.wrc.umn.edu)) is a joint unit of the College of Food, Agricultural, and Natural Resource Sciences and University of Minnesota Extension. As Director, Dr. Peterson provides overall leadership for the WRC’s research, outreach, and teaching activities involving faculty and students across the university. He will provide overall leadership for project and coordinate the project’s outreach activities with agencies and the public.

**Leif Olmanson, PhD.**

**Co-PI/Project Manager; Research Associate. Remote Sensing and Geospatial Analysis Laboratory, Dept. of Forest Resources**. Dr. Olmanson has worked for over 20 years on developing remote sensing applications for water quality and was a co-developer of the popular Lake Browser ([water.rs.umn.edu](http://water.rs.umn.edu/)). He has been working on validation of atmospheric correction methods, cloud, haze and shadow masking and algorithm development that will be essential to the success of this project. He will contribute to developing computer code for prototype image pre-processing and algorithms to derive water quality products, and will oversee the geospatial and temporal analysis portion of this project.

**Lucia Levers, PhD.**

**Co-PI; Research Associate, University of Minnesota’s Water Resources Center.** Dr. Levers incorporates natural resource, ecological, and environmental economics into interdisciplinary research projects. She will be leading the economic valuation and analysis portions of the project, and supervising the student researchers.

**David Porter, PhD.**

**Co-PI; Scientific Computing Consultant, Minnesota Supercomputing Institute**. Dr. Porter has worked for over 30 years developing and optimizing a variety of simulation and data processing applications. He will oversee all supercomputing aspects from developing applications and automated workflows for ingestion of the imagery from national centers, using the MSI's HPC resources for pre-processing and processing of the imagery into water quality products. He will also oversee the addition of the historical water quality data into the Enhanced LakeBrowser.

**Benjamin Page, MS.**

**Co-I; Research fellow, University of Minnesota’s Water Resources Center.** Mr. Page has an extensive background in satellite-based remote sensing and geospatial analysis of inland waters. His current work focuses on calibrating Landsat and Sentinel imagery to characterize optically active constituents in Minnesota’s > 10,000 inland water bodies for the near real-time water quality monitoring system. He will be involved in the remote sensing and geospatial and temporal analysis aspects of the project.

**Organization Description**

All personnel are based at the University of Minnesota, one of the largest, most comprehensive, and most prestigious public universities in the US ([umn.edu/twincities](http://www1.umn.edu/twincities/01_about.php)). The labs and offices of the investigators and collaborators are equipped with the necessary space and facilities needed for the proposed work.