**Project Manager: Jay T. Hatch, Associate Professor, College of Education and Human Development Dean’s Office, University of Minnesota**

**Qualifications**

Dr. Jay Hatch has conducted research on fishes and aquatic ecosystems of the upper Midwest for the past 47 years. Studies have included impacts of power-generating facilities on fish and macroinvertebrate communities in major rivers and the Great Lakes; life history, habitat selection, resource utilization, behavior, and distribution studies of Minnesota native fishes; and more recently studies of fish passage through potential barriers. Fifty-seven of his 86 published works are based on this research. Dr. Hatch has been faculty at the University of Minnesota for 37 years, having been tenured since 1987. He joined the Graduate Faculty in 1990 and served as Associate Curator of Ichthyology (fishes) in the James Ford Bell Museum of Natural History from 1986 to 2006. He has been in the Dean’s Office of the College of Education and Human Development for the past three years, and continues to conduct research and advise graduate students in the Department of Fisheries, Wildlife and Conservation Sciences. He has managed budgets and supervised personnel for 27 research and development projects. He served on the U.S. Fish and Wildlife Service National Recovery Team for the endangered Topeka Shiner, the National Park Service OMV Technical Assessment Team for the St. Croix River, and the Minnesota Comprehensive Wildlife Conservation Strategy Technical Team. Currently, he serves on Minnesota’s Topeka Shiner Recovery Team, MNDOT’s Technical Advisory Panel for fish passage research, and MNDNR’s Minnesota Fish Species Technical Advisory Team.

**Responsibilities**

Dr. Hatch will manage the project budget, provide input and data regarding fish movement and behavior, review data and provide ecological input to data interpretation, write reports and manuscripts, and present results. He will rely on Dr. Anvar Gilmanov to carry out the extensive computer simulations required for this project. Dr. Gilmanov, Professor of Theory of Heat-and-Mass Transfer at Kazan Energy Power University (Russia) and currently Research Associate in the Minnesota Aquatic Invasive Species Research Center, has developed the fluid dynamics and agent-based computer codes upon which most of the proposed research will be based. He has made eight professional presentations and has published seven peer-reviewed journal articles stemming from work directly leading to this proposal.

**Organization Description**

“The University of Minnesota, founded in the belief that all people are enriched by understanding, is dedicated to the advancement of learning and the search for truth; to the sharing of this knowledge through education for a diverse community; and to the application of this knowledge to benefit the people of the state, the nation, and the world.”

Founded at the University of Minnesota in 2012, the Minnesota Aquatic Invasive Species Research Center’s mission is “to develop research-based solutions that can reduce the impacts of aquatic invasive species in Minnesota by preventing spread, controlling populations, and managing ecosystems; and to advance knowledge to inspire action by others.”