

## **M.L. 2017 Minnesota Aquatic Invasive Species Research Center Subproject Abstract**

For the Period Ending June 30, 2022

**SUBPROJECT TITLE:** MAISRC Subproject 23: AIS Management: An Eco-economic Analysis of Ecosystem Services

**SUBPROJECT MANAGER:** Dr. Amit Pradhananga

**ORGANIZATION:** University of Minnesota Twin Cities

**COLLEGE/DEPARTMENT/DIVISION:** Department of Forest Resources, Center for Changing Landscapes

**MAILING ADDRESS:** 1530 Cleveland Avenue N

**CITY/STATE/ZIP:** Saint Paul, MN 55108

**PHONE:** 612-624-6726

**E-MAIL:** prad0047@umn.edu

**WEBSITE:** <https://maisrc.umn.edu/public-values>

**FUNDING SOURCE:** Environment and Natural Resources Trust Fund (ENRTF)

**LEGAL CITATION:** M.L. 2013, Chp. 52, Sec. 2, Subd. 06a

M.L. 2017, Chp. 96, Sec. 2, Subd. 06a

**SUBPROJECT BUDGET AMOUNT:** \$242,090

**AMOUNT SPENT:** \$241,394

**AMOUNT REMAINING:** \$696

### **Sound bite of Project Outcomes and Results**

Minnesotans hold great value for Aquatic Invasive Species Management, both to lakes they visit and to waterbodies in the state as a whole and are willing to pay significantly for it. Minnesotans are concerned about AIS and are generally supportive of AIS management actions and policies.

### **Overall Subproject Outcome and Results**

Minnesota hosts a number of aquatic invasive species (AIS), which have far-reaching impacts on Minnesota's waterbodies, and subsequently its population. However, little was known about how Minnesotans value AIS, as well as costs associated with AIS management. To address this, we collected data on aquatic invasive species management and costs, public perceptions, values, knowledge, and willingness to pay for aquatic invasive species management via several surveys of different types spanning 2019 to 2021. Surveys of watershed districts and soil and water conservation districts provided data from 92 lakes across 12 counties, showing that carp management is a priority in Minnesota. We also were able to collect data on costs and types of management employed. On the individual side, an onsite survey of approximately 1000 people visiting lakes in the summer showed us visitors are willing to pay for AIS management at the lakes they are visiting and hold significant value for Minnesota's water resources, though individual AIS species present are not impactful for these social values. We also collected data through a mail survey of about 300 people, which confirmed Minnesotans' intrinsic value for water resources. Many residents are willing to pay for AIS management statewide, meaning they do not have to directly visit or use a lake to find value in it. This project is important as it provides data to support the viewpoint that Minnesotans do in fact have great value for AIS management and are willing to pay to expand management across the state.

### **Subproject Results Use and Dissemination**

This project's findings have been disseminated through nine oral and poster presentations to researchers, resource professionals (e.g., Minnesota Department of Natural Resources), lake associations, policy makers, and the general public (e.g., lakeshore residents) at professional conferences (e.g., Minnesota Water Resources Conference), Minnesota Aquatic Invasive Species Research Center (MAISRC) Research & Management

Showcase, and invited seminars (e.g., Minnesota DNR, AIS Detectors' Aquatic Invasive Species Webinar Series). We have published one open access article in a peer-reviewed journal (PLOS ONE). We have developed a fact sheet highlighting findings from the statewide survey conducted with Minnesota residents. In coordination with MAISRC, we developed a handout of findings from the survey conducted with recreationists at four Minnesota lakes. We plan to continue to disseminate study findings through presentations and peer-reviewed journal articles. We have submitted two abstracts to the International Association for Society and Natural Resources Conference and Universities Council on Water Resources Annual Conference to be held in June, 2022 and are currently preparing three additional manuscripts for submission to peer-reviewed journals.

#### *Peer-Reviewed Publications*

- Levers, L., & Pradhananga, A. (2021). [Recreationist Willingness to Pay for Aquatic Invasive Species Management](https://doi.org/10.1371/journal.pone.0246860). *PLOS ONE*. <https://doi.org/10.1371/journal.pone.0246860>

#### *Presentation Recordings/Videos*

- 2021 MAISRC Research & Management Showcase Common Carp Panel  
<https://z.umn.edu/2021ShowcaseCommonCarpPanel>
- AIS Detectors Webinar: Recreationists' Willingness to Pay for Aquatic Invasive Species Management  
<https://z.umn.edu/DetectorsWebinarWillingnessToPay>
- MAISRC Video: Valuing Aquatic Invasive Species Management  
<https://z.umn.edu/MAISRCValuingAISManagement>