

2013 Project Abstract

For the Period Ending July 31st, 2017

PROJECT TITLE: Aquatic Invasive Species Research Center Sub-Project #11-2: Reducing and controlling AIS: Risk analysis to identify AIS control priorities and methods – Phase 2: Risk Analysis

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APPROPRIATION AMOUNT: \$126,676

Overall Project Outcome and Results

Bighead and silver carps (bigheaded carps) pose a threat to Minnesota's waterways and there is a need to better understand their potential impacts to inform management actions. Towards this end, project researchers designed and conducted a risk assessment for bigheaded carps in Minnesota. Results from previous (Phase 1) research and a survey with risk assessment participants were used to focus the scope of the risk assessment on four potential adverse effects: impacts to game fish, non-game fish, species diversity/ecosystem resilience, and recreation (from the silver carp jumping hazard). Four watersheds were focused on, selected to be both geographically diverse and relevant to the current decision making context.

The risk assessment was conducted with the participation of twenty-three experts on bigheaded carps and Minnesota's waterways. A workshop was held to discuss the risk assessment findings and their implications for the management of bigheaded carps in Minnesota, and 50 people attended including stakeholders, researchers, managers, decision makers, and members of the public. Insights garnered from this workshop informed the final version of the risk assessment report, "Minnesota Bigheaded Carps Risk Assessment" which was released in May 2017.

This risk assessment represents the first systematic analysis of the risks posed to Minnesota from bigheaded carps and will both justify and inform future management efforts. Specific findings from this report include that the risk from bigheaded carps varies greatly depending on the watershed and potential adverse effect considered. The risk was higher for the species diversity/ecosystem resilience and recreation potential adverse effects and for the Minnesota River-Mankato and Lower St. Croix River watersheds. These findings emphasize the need for a timely management response to protect watersheds identified as most at risk, while ensuring that any collateral damage from management actions leads to less ecological harm than bigheaded carps are likely to cause.

Project Results Use and Dissemination

Project results were disseminated through conference presentations, presentations to stakeholders, media news stories, a journal article, and a project report. Professional conference presentations included: 1) The 2016 American Fisheries Society Meeting on August 24th, 2016; 2) The 2016 Upper Midwest Invasive Species Conference on October 18th, 2016; and 3) The 2016 Society for Risk Analysis meeting on December 13th, 2016. Project results

were also presented to academics and researchers at the November 22nd, 2016 Semi-annual All-MAISRC (Minnesota Aquatic Invasive Species Research Center) Meeting.

Presentations to stakeholders and members of the public included: 1) the Minnesota Invasive Carp Forum on March 10th, 2016; 2) the St. Croix River Association's AIS Group Meeting on June 8th, 2016; 3) the MAISRC Research Showcase on September 12th, 2016; 4) the "Risk Based Management for Bigheaded Carps" workshop held to discuss project findings and implications on March 15, 2017; and 5) the Minnesota Invasive Carp Forum on March 29th, 2017. Project outcomes and findings were also covered in a news update on Minnesota Public Radio on March 15, 2017.