ML 2018 Project Abstract
For the Period Ending June 30, 2023

PROJECT TITLE: Integrated emerald ash borer management: testing a novel approach to assess stakeholder perceptions
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FUNDING SOURCE: Environment and Natural Resources Trust Fund
LEGAL CITATION: ML 2018, Ch 214, Art 4, Sec 2, Subd 6a

APPROPRIATION AMOUNT: $436,072
AMOUNT SPENT: $436,072
AMOUNT REMAINING: $0

Sound bite of Project Outcomes and Results

Virtual reality can help recreationists visualize impacts from emerald ash borer and its management. This research on social perceptions and silvicultural strategies will help natural resource managers to be more effective in selecting and communicating forest management responses to invasive species.

Overall Project Outcome and Results

Nearly 8% of all the trees in Minnesota are ash species, all of which are threatened by the invasive emerald ash borer (EAB). EAB cost managers across the country an estimated $10.7 billion between 2002 and 2019 to treat, remove, and replace more than 17 million ash trees. Current best management practices include methods like clearcutting or group selection, the selective removal of small groups of trees with or without replanting. When trees are removed, the visual experience of a forest is changed for the public—sometimes to negative reception. This project aimed to better understand public perceptions of major EAB management approaches by allowing participants to visualize the effects to forest structure through virtual and augmented reality.

This team merged research on social perceptions and silvicultural strategies to help natural resource managers better communicate with the public about forest management, specifically when managing in response to emerald ash borer. Communication efforts can increase the public's acceptance of forest management actions and affect their intent to return to a site. Communicating through photos and text were sufficient ways to demonstrate to visitors what and why certain forest management actions are taken, especially in areas where visitors dominate. Virtual reality was a helpful tool in areas where the natural landscape dominates and when harvesting was part of management actions.

Project Results Use and Dissemination

Three peer reviewed publications have derived from this research project. All peer reviewed publications are permanently archived. Multiple public presentations were made through the UMN Extension program, as well as management and academic conferences. A full listing may be found on the MITPPC webpage dedicated to this research project.

Other products include a video research abstract and shared for YouTube page, a downloadable virtual reality app.