

Nicole Kovski, MS

The Main Takeaway:

We utilize a non-market valuation method, based on travel costs, to measure boater visitation rates and access values for 39 lakes in Wisconsin. The presence of Eurasian Watermilfoil, an aquatic invasive species which is transmitted between lakes via boating equipment, has been documented at all 39 lakes. We calculate and compare the marginal costs of abating Eurasian Watermilfoil propagules, considering the magnitude of control achievable with varying ramp fees and via the installation of boater wash stations.

Title: *Recreational Boating and the Spread of Eurasian Water milfoil – Determinants of Boater Demand and the Costs of Prevention Efforts in Wisconsin”*

Abstract:

In the case of lake management for recreational use, policy makers often face a balancing act. They must maintain both the ecological quality of sites and the welfare of recreationists. In Wisconsin’s Northern Highland Lake District, recreational boaters inadvertently transport aquatic invasive species between lakes. Economic models of boater demand for lake recreation enable the estimation of the number of Eurasian Watermilfoil propagules that depart invaded lakes via boating vessels. To prevent landscape-level spread, in lake-dense regions with a relatively small ratio of invaded to un-invaded lakes, previous research demonstrated optimal prevention efforts focus on “donor” rather than “recipient” lakes. We utilize a non-market valuation method, based on travel costs, to estimate determinants of boater demand, as well as lake-specific visitation rates, access values, and expected boater response to ramp fees at “donor” lakes. When lake managers are committed to reducing the total number of boater trafficked Eurasian Watermilfoil propagules, marginal abatement cost curves can identify cost-efficient means of meeting reduction goals. We produced and compare marginal abatement cost curves for Eurasian Watermilfoil, considering the magnitude of propagule traffic reduction achievable with varying ramp fees and via the installation of boater wash stations. We tested our marginal abatement cost estimates for sensitivity to key economic and ecological model assumptions.

