

Development and Deployment of Habitat Suitability Models
Under Current and Future Climate for Regulated Invasive Plants in Wisconsin
(NIFA)

This project will improve the ability to detect regulated invasive terrestrial plants spreading across Wisconsin's landscape. Regulated invasive species in Wisconsin have been demonstrated to have the potential to impact the economy, environment, and/or human health. These impacts include agricultural systems where direct and indirect effects can impact production practices. Early detection has been identified as a successful tool for preventing impacts of new invasive plants, but tools are needed to improve efficiency in detection as limited resources are available to survey for these pests.

We propose creating predictive models for at least twenty regulated invasive terrestrial plants in Wisconsin. These models will increase knowledge of drivers of invasion and prioritize areas requiring frequent monitoring to detect new populations before they become widespread. Model results will also be combined across species and used to test if improvements in monitoring efficiency can be documented. Impacts of future climate projections into 2050 on potential range of these species will also be evaluated across the state and within ecoregions. Through these efforts detection of regulated invasive plants will be enhanced and improve the ability for land managers to minimize the adverse effects of these species in Wisconsin.