

**ML 2014, Chapter 312, Article 12, Section 8, MITPPC Sub-Project #5 Project Abstract**  
For the Period Ending January 31, 2021

**PROJECT TITLE:** MITPPC #5: Terrestrial invasive species prioritization

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**FUNDING SOURCE:** Environment and Natural Resources Trust Fund

**LEGAL CITATION:** ML 2014, Chapter 312, Article 12, Section 8

**APPROPRIATION AMOUNT:** \$32,000

**AMOUNT SPENT:** \$32,000

**AMOUNT REMAINING:** \$0

**Sound bite of Project Outcomes and Results**

This project produced written risk evaluations of 12 terrestrial invasive species requested for review by MITPPC stakeholders and drafted a rubric for soliciting TIS review requests in the future. It also resulted in a scientific article formally describing the MITPPC prioritization process.

**Overall Project Outcome and Results**

In 2017, the Minnesota Invasive Terrestrial Plants and Pests Center undertook an expansive research prioritization to systematically evaluate threats posed by a wide array of terrestrial invasive invertebrates, plants, and plant pathogens and created the document, "*Minnesota's Top 124 Terrestrial Invasive Plants and Pests: Priorities for Research*," which has provided guidance on funding MITPPC research projects in subsequent years. Since its publication, many terrestrial invasive species (TIS) have been suggested for further review by stakeholders. The movement of TIS into Minnesota and their potential harms calls for a thorough review of suggested species.

Following methodology developed in the 2017 document, this MITPPC project evaluated 12 TIS submitted for review. The evaluations are incorporated into the Analytic Hierarchy Process (AHP) model used by MITPPC to rank and prioritize the TIS that threaten Minnesota's terrestrial ecosystems. AHP is a form of multi-criteria decision analysis that makes the process of selecting the highest priority threats consistent and transparent. AHP has been used by many agencies and organizations to facilitate complex decision-making. Evaluations from this project will be incorporated into the 2022 update of MITPPC research priorities. In addition, a process for soliciting stakeholder TIS review requests was outlined and provided to MITPPC leadership for future consideration. The process is intended to encourage systematic and transparent solicitation of TIS of concern from stakeholders.

Initial plans for the project also involved comparing methods of climate suitability modeling for TIS to identify a method most useful in MITPPC evaluations. In consultation with MITPPC leadership, the project instead focused on writing a formal and more detailed description of the MITPPC prioritization process outlined in the 2017 whitepaper. The manuscript was submitted and accepted to a scientific journal. The forthcoming publication will be an important resource for communicating the transparency and rigor of MITPPC research priorities.

**Project Results Use and Dissemination**

A technical manuscript describing the MITPPC prioritization process was submitted and accepted (pending revisions) to the Journal of Environmental Management.

An oral presentation was given at the 2020 Upper Midwest Invasive Species Conference (Nov. 2020) entitled, "Making better MaxEnt models for invasive species", which presented MITPPC-funded research on

species distribution modeling for the European Gypsy Moth. In addition, the Project Lead (Morey) was a co-author on another presentation given at the 2020 UMISC, entitled “Prioritizing Minnesota’s Top Terrestrial Invasive Plants & Pests for Research”, which presented information on MITPPC and its prioritization process.