Improving Invasive Species Management with Citizen Science

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Wisconsin First Detector Network (WIFDN)

And:
Provide useful tools and resources to help people improve invasive species management
WIFDN Impacts 2014-2018

2977 participants attended 84 in person trainings led by WIFDN

15,388 views of WIFDN videos, totaling over 1400 hours of training material viewed

12,088 invasive species reports

9620 volunteer hours through 2017

200 people trained via webinar series
2017 WIFDN Impacts

4078 reported volunteer hours $\times$ $24$/hour (Independent Sector’s 2017 WI volunteer value) = $97,872

2464 miles traveled to volunteer activities $\times$ $0.535$/mi (2017 Federal mileage reimbursement rate) = $1,318

Total Impact = $99,190
Citizen Science Tools

EDDMapS
Early Detection & Distribution Mapping System

Great Lakes Early Detection Network
Volunteers
Initiating and informing roadside management
Kinnickinnic Master Gardeners

• Wild parsnip on roadsides
• GLEDN training
• Mapped over 2-3 weeks
Informing Management

• Map shared with highway department
• Demonstrations of control techniques
• Development of comprehensive plan
Researchers

Developing predictive tools for land managers
Habitat Suitability Maps

- Species occurrence records
- Includes thousands of reports from EDDMapS users

- Precipitation
- Temperature
- Soils attributes
- Distance to dispersal corridors
- Topographic attributes
- Vegetation indices
Initial Modeling Process
Predictive Tools for Land Managers
Reiterate Modeling Process
Developing Priority Species Lists for Citizen Scientists

Lists of 10-15 species:
1. High Priority
2. Priority
Priority Invasive Species Lists in Wisconsin

Access the story map at: http://arcg.is/2ob5PdW

Invasive plants are a pervasive problem. The ability to detect an invasive species in the early stages of an invasion is critical to control and eradicate populations. The following map series depicts the results of efforts to model the suitable habitat of regulated invasive plants across the state of Wisconsin. This research was performed in the Renz Lab at the University of

2. Display county-specific species lists for invasive species likely to be present (10-15 species)
3. Encourage reporting invasive species occurrences

If you are interested in getting involved with our project, we need help locating these (and other) species! Click on your county on the map to the right to find out which invasive plant species are of greatest priority. Species highlighted in yellow (high priority species) have been identified as those with large areas of suitable habitat in the county, but very few, if any, species occurrence records are currently available. If you are not sure if your location has been reported, click the tab that lists the species of interest to view a map of known locations and links to resources to aid in identification.

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> 5000 records in 2017 – 2018
Land Managers

Improving data management and communication with volunteers
Dane County Parks

• 60+ properties
• Friends groups + other volunteers
CBM Partnership Project

- 3 training sessions
  - Seasonal plant I.D.
  - GLEDN
  - Management
  - ISMTrack
- >130 attendees
MONITORING INVASIVE PLANTS IN WISCONSIN

Wisconsin First Detector Network + Dane County Parks
• >1,200 reports
• 30+ species
• 22 parks properties
• 560+ management activities
Resources for Citizen Scientists
Identification and Management of Invasive Plants in Wisconsin

Invasive plants can thrive and aggressively spread beyond their natural range, disrupting ecosystems. The Identification and Management of Invasive Plants in Wisconsin video and fact sheet series explains how to identify invasive plants and provides common management options. Management methods recommend specific timings for treatment, as well as expected effectiveness. For more information, go to: fyi.uwex.edu/wifdn/learn/invasive-species-i-d-and-impacts
Canada Thistle
*Cirsium arvense*

A listed invasive plant found on roadsides in Wisconsin
Wisconsin Shared Terrestrial Invasive Plant Presence Viewer

Cumulative Number of Reports Over Time

- Observation Year:
  - 1992 to 2017

- Classification:
  - All

- Common Name:
  - All

- Observation Date Range:
  - 1998 to 2016

*Due to internal policies, some wetland species locations are unable to be shared.*

Last updated: 7/24/2018
Thank you!

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