

Evaluating the Suitability of Roadway Corridors for Use by Monarch Butterflies

Funded by the National Cooperative Highway Research Program

Alison Cariveau
MJV Science Coordinator
St Paul, MN

E Lonsdorf, E Snell-Rood,
K Baum, E Anderson,
J Hopwood



Photo: Jennifer Hopwood

Tools for transportation managers to provide monarch habitat



GIS
Prioritization
Model



Best
Management
Practices

Rapid Field
Assessment

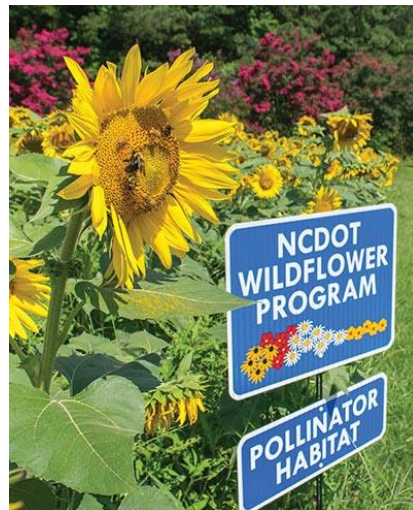


Habitat
Calculator



Survey: Roadside Managers

- 79 responses, 19 states (14 pollinator programs)
- Interests: habitat planning and assessment
- Needs: time, money, communications
- Capacity and management practices



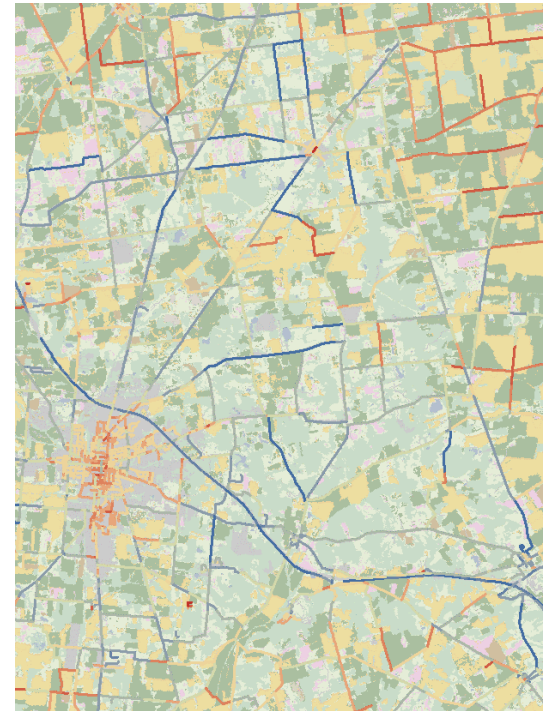
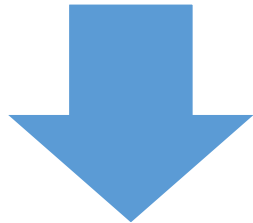
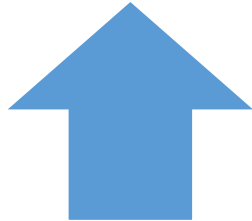
GIS Prioritization Model

- Construction, Revegetation
- Where to Invest
- Rank Roadsides

- Wider

- By Natural Lands
(fewer chemicals,
weeds)

- Traffic Volume
(collisions and salt, zinc,
phosphorus, nitrogen)



Priority Area for Habitat

— High
— Low



Rapid Field Assessment (10 min)

- Walk 150 ft
- Zig zag across ROW
- Plants: milkweed, flowers, noxious weeds
- Width habitat, mowed
- Protocol compared well
- Monarch breeding on 35% of sites with milkweed



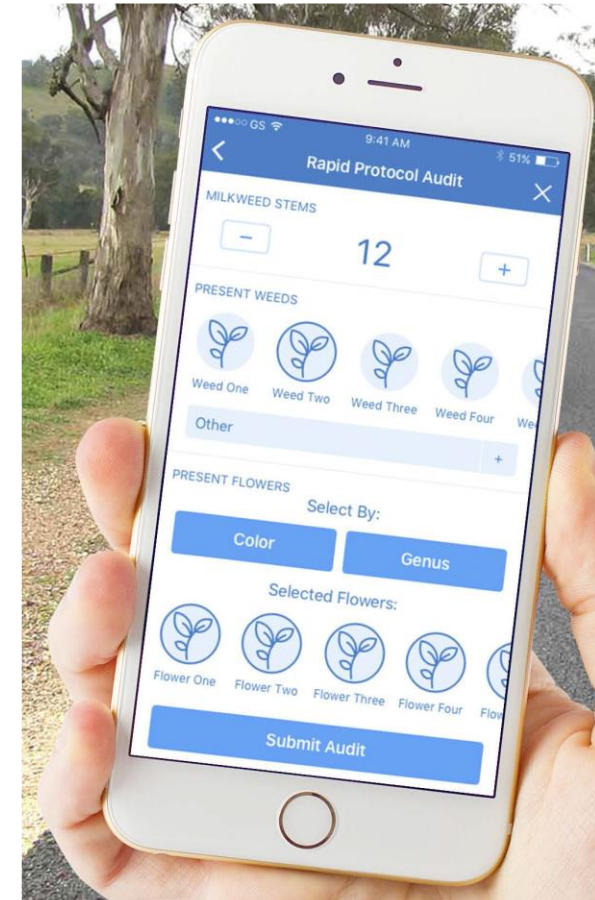
Habitat Calculator

Rapid Field Assessment

Calculate habitat score

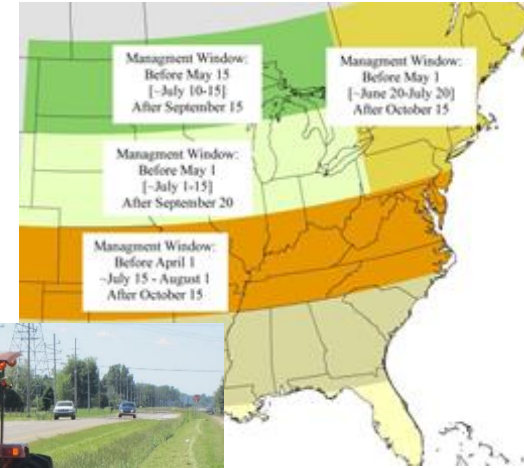
Identify exemplary sites or opportunities to improve

Connect to BMP's



Best Management Practices

- Mobile friendly website
- Regional, context-dependent BMP's
- Cost estimates
- Summaries and highlights
- Messaging for DOT's



Minnesota DOT





Giuseppina Croce

Alison Banks Cariveau: acarivea@umn.edu

