

Monarch Wings Across America



NACD Webinar
April 16, 2020

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Pollinator Partnership

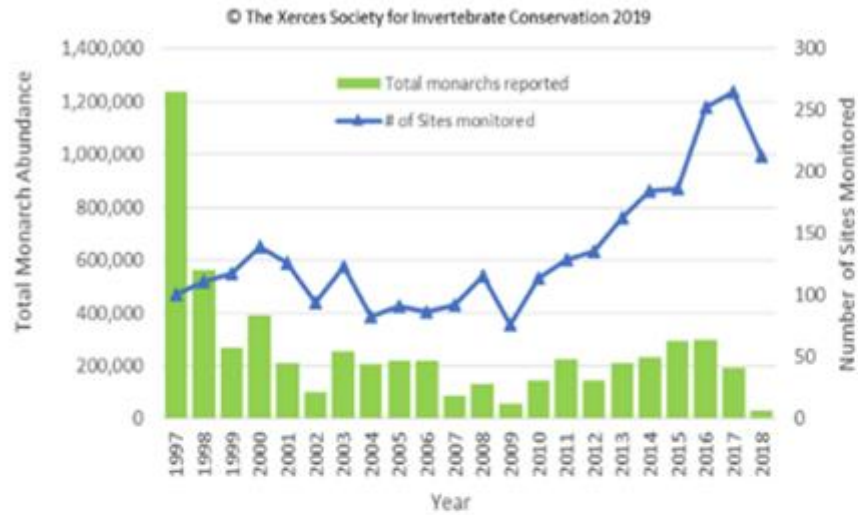
Protection for pollinators through habitat creation, collaboration, education, sound science, and sensible public policy

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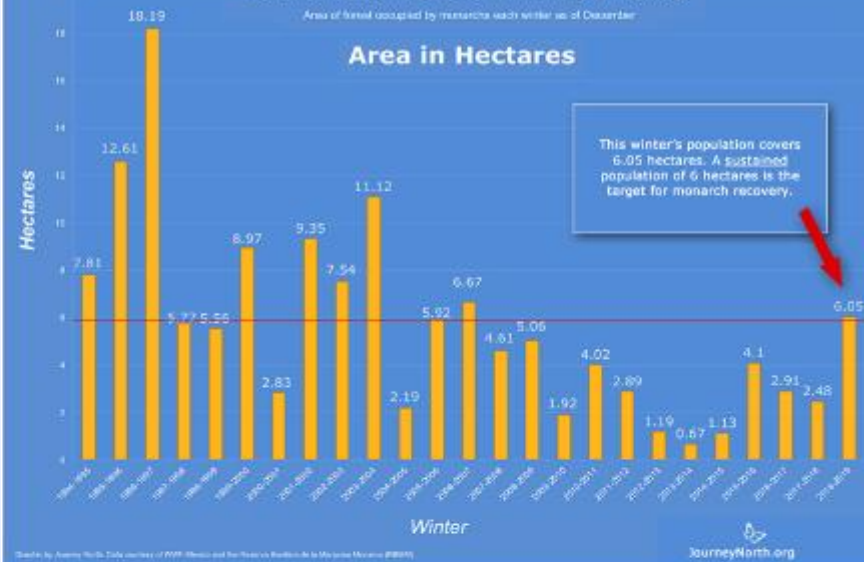
The Xerces Society Western Monarch Thanksgiving Count

Total Abundance Estimates w/Number of Sites Monitored from 1997-2018

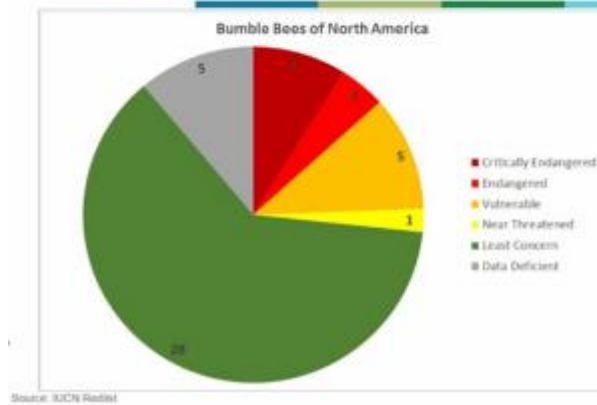


Monarch Butterflies Overwintering in Mexico

Area of forest occupied by monarchs each winter as of December



Bumble Bee Status Assessment



North America

One quarter of all bumble bee species are in a threatened or near threatened category.

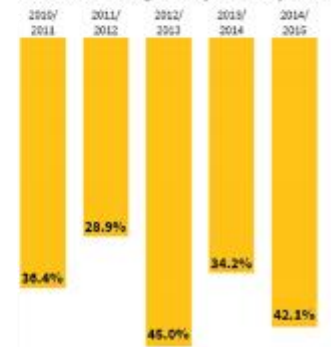


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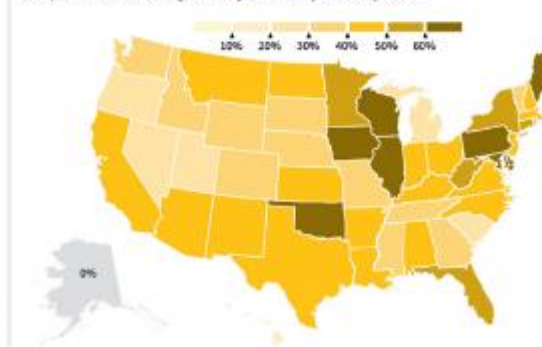
Managed honey bee colony losses increase

While winter losses were lower, summer losses – exceeding those of winter for the first time – resulted in an increased annual loss of 42.1 percent from April 2014 to April 2015.

Total annual managed honey bee colony losses

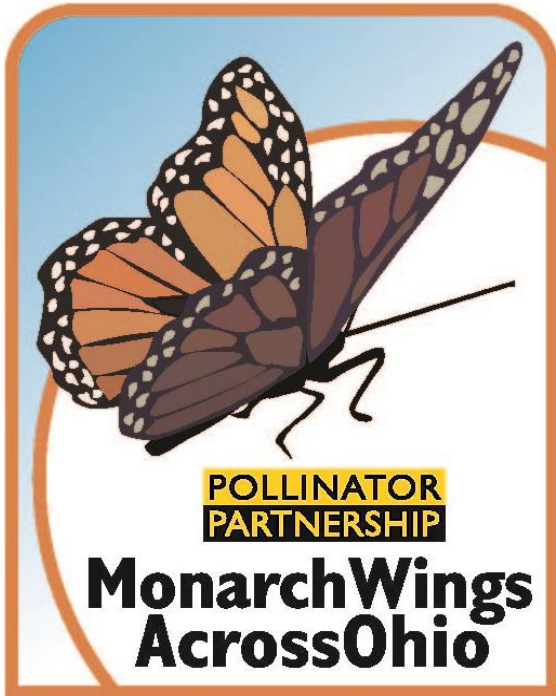


2014/2015 annual managed honey bee colony losses by state



© 2015

Monarch Wings Across America



HABITAT
IN
PROGRESS



Monarch Wings Across Ohio (MWAO)



MWAO: Program Overview

- **Created in response to the Presidential directive on supporting the monarch migration**
- **Diverse collation of partners to install monarch habitat research plots across partners' land in the following settings; urban ecosystems, agriculture, corporate lands, and public gardens throughout Ohio**



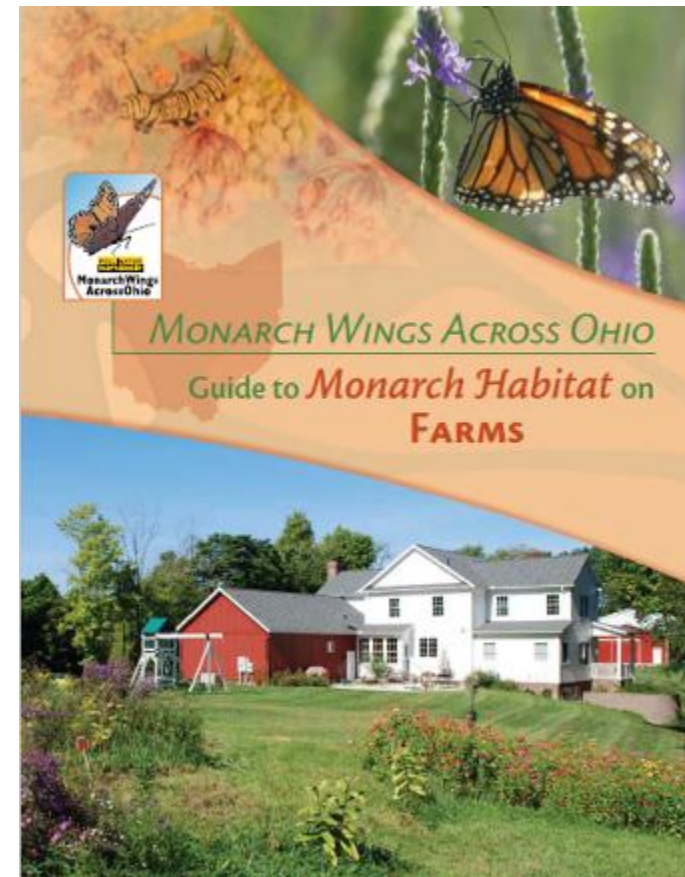
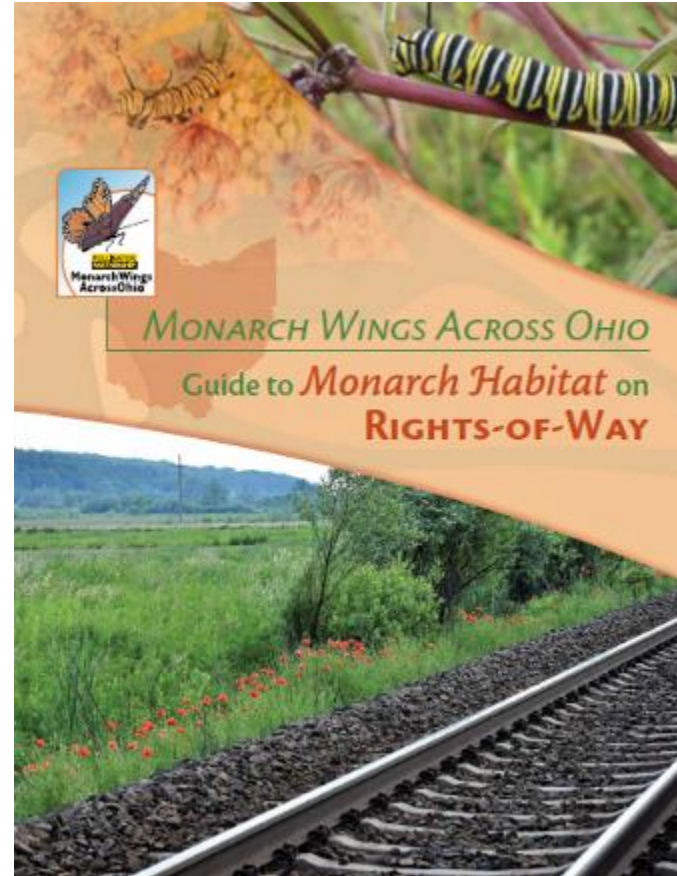
MWAO Achievements

- 18 plots established throughout northeast Ohio
- Monarch Wings Across Ohio specialty license plate
- 3 years of data collection
 - Each plot is visited once a month
 - Data resulted in findings for native plant preference for monarchs and other pollinators
 - Informed technical guides for land managers



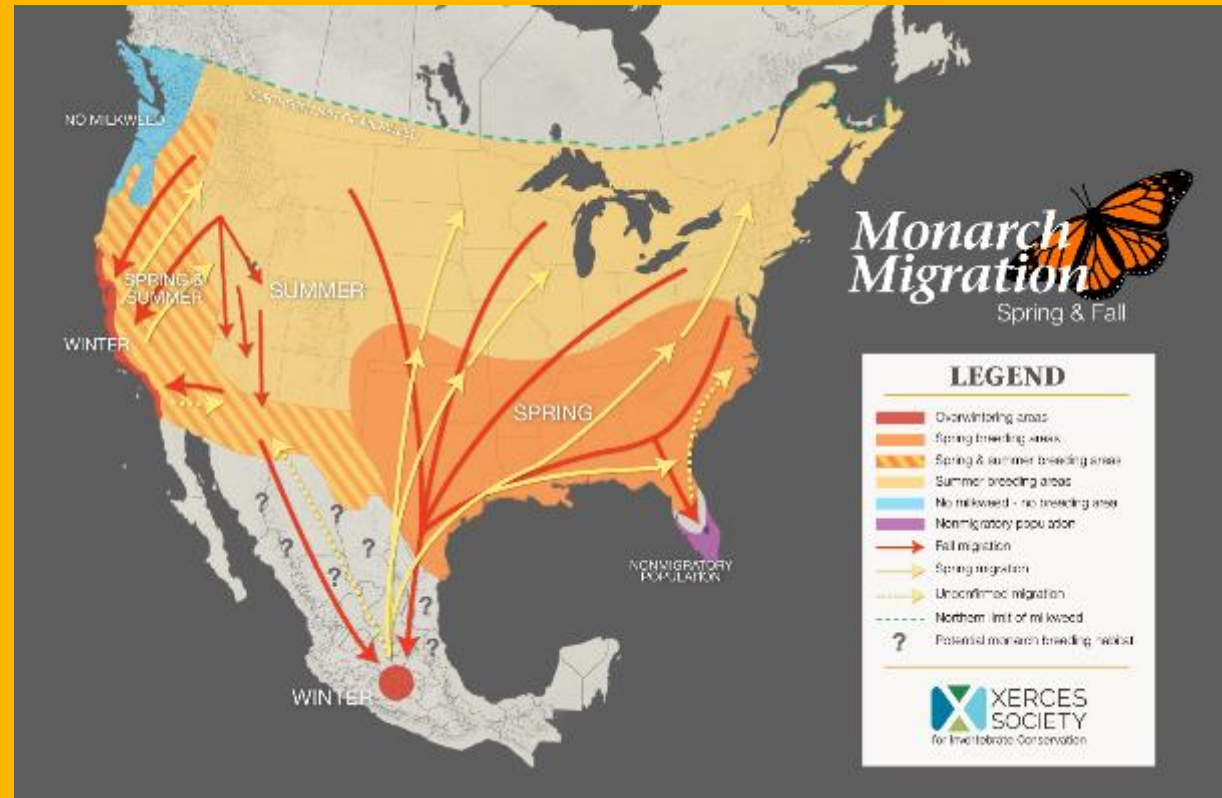
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MWAO Technical Guides



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Monarch Wings Across California (MWAC)



MWAC Objectives

1. Establishment of long-term habitat sites for migrating monarchs in California,
2. Improved understanding of the migration patterns and forage requirements of California monarch butterflies,
3. Collection of California monarch habitat restoration data to inform restoration efforts and indicate potential seed sources for future projects

Support from Wildlife Conservation Board, Monarch Joint Venture, and Hillsborough Garden Club



MWAC Progress



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MWAC Accomplishments

- 3 long-term monarch butterfly habitat and research plots, with three more underway for 2020
- Over 50 individuals in planting demonstrations and activities

Upcoming

- Hiring part-time coordinator
- Monitoring through March 2022
- Demonstration plots for landowner workshops
- Large-scale seeding to enhance 3,000 acres in Central Valley

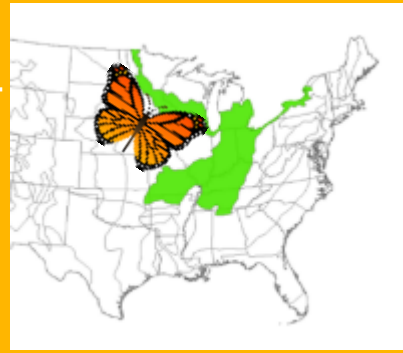


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Monarch Wings Across the Eastern Broadleaf Forest

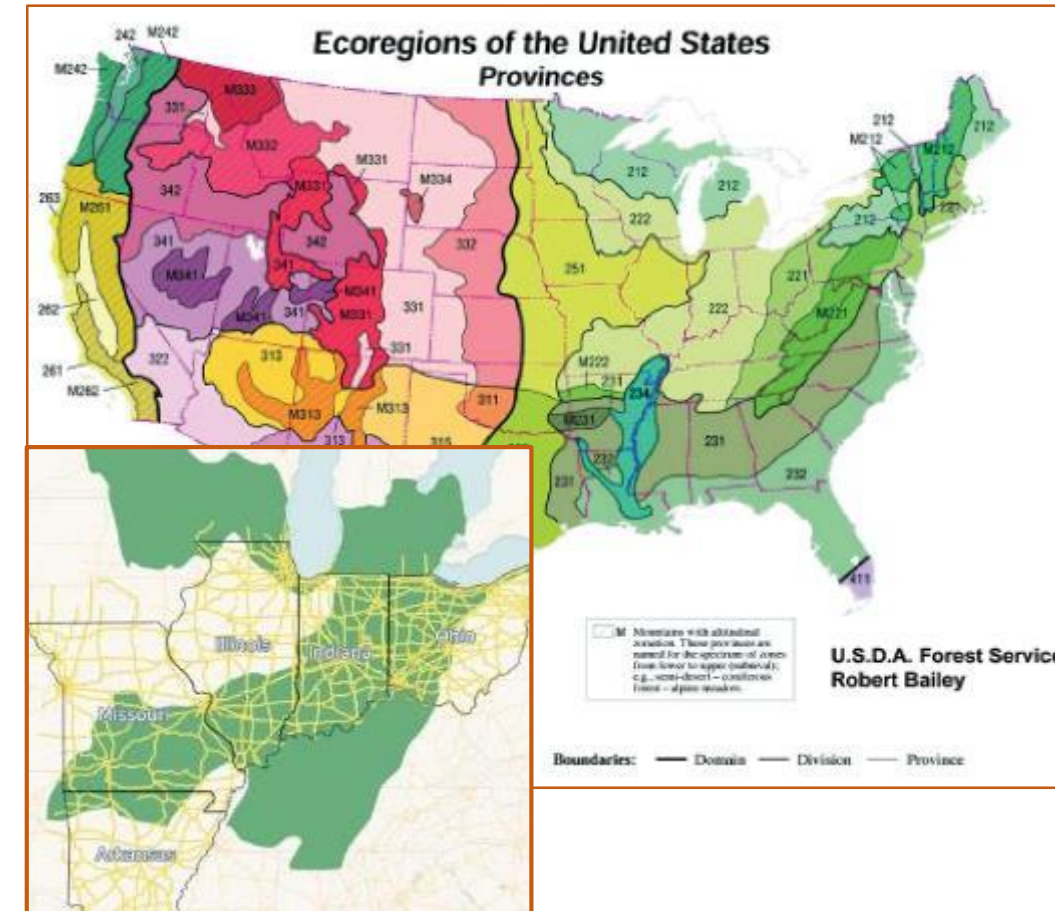
December 2016 - March 2019

**Increase Quality Monarch Habitat in EBF-CP
Ecoregion**



Program Goals and Objectives

- Establish a ecoregional seed collection and plant materials development program
- Provide technical guidance and educational support to public and private land managers
- Secure minimum of 4,688 acres long-term monarch habitat



Seed Collection and Volunteer Training

Seed Collection Protocols Rooted in SOS Model

In-person Workshops and Online Training

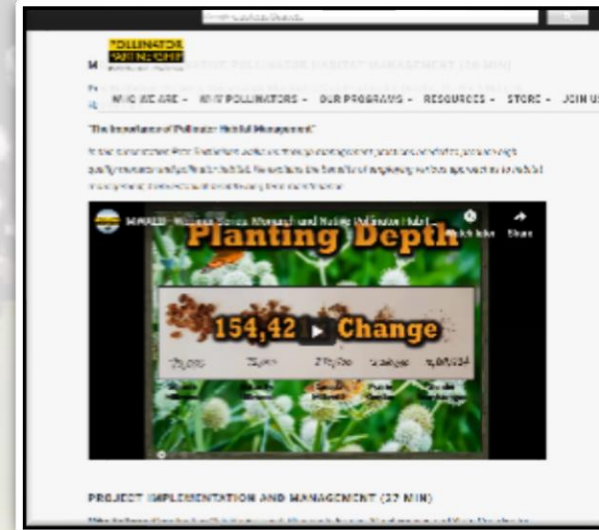
- 327 Volunteers Trained
- 2,792 Volunteer Hours
- 368 Seed Collections
- 100 lbs. Clean Seed



Habitat Management and Technical Training

In-person Workshops and Online Training

- **5 Habitat Management Workshops Across Region**
- **175 Public Agency and Private Land Manager Participants**
- **7-part Habitat Creation and Management Webinar Series**



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Secured Long-term Habitat and Monarch Habitat Enhancement

Site Visits

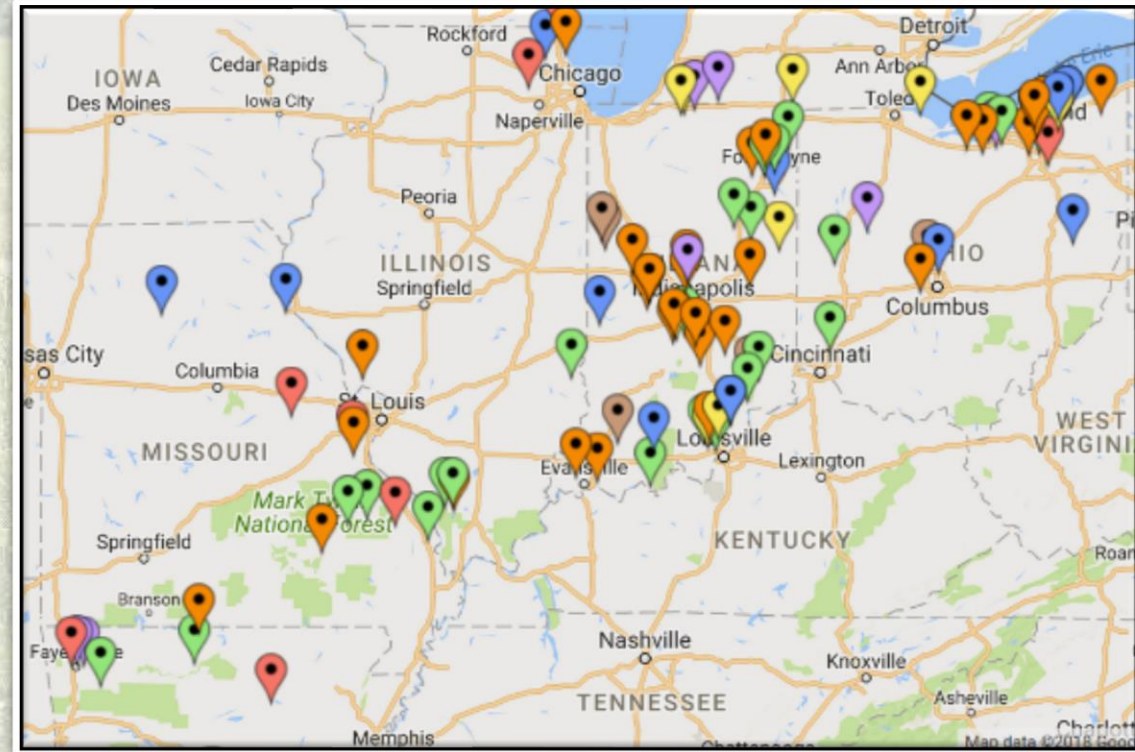
- 97 Habitat Evaluation and Consultation Visits

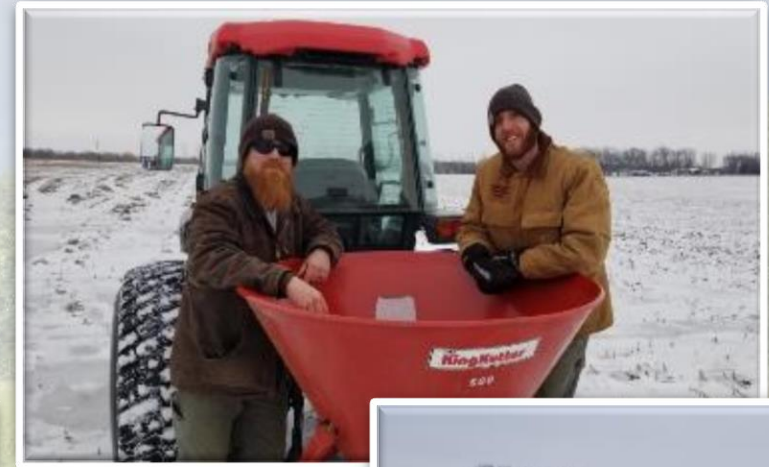
Plant Material Awards for Habitat Enhancement

- 65 Projects
- 100 lbs. Clean Seed Redistributed
- 11,482 Plugs Grown
- Additional \$37,900 in Awards for Seed, Plugs, and Invasive Species Control

Secured Habitat

- 27,731 Acres Signed into Long-term Management Agreements (surpassed original goal of 4,688 acres)





Project Wingspan

December 2018 – December 2020



A Regional Seed Collection and Native Plant Materials Development Program Across the Midwestern and Great Lakes Landscape

Program Goals and Objectives

- **Increase quality, quantity, and connectivity of habitat across Midwest and Great Lakes Region**
- **Provide increased floral resource benefits for monarchs, rusty-patched bumble bees, and other rare pollinator species**
- **Make 1000 seed collections/250 lbs. clean seed**
- **Secure a minimum of 10,000 acres long-term habitat**





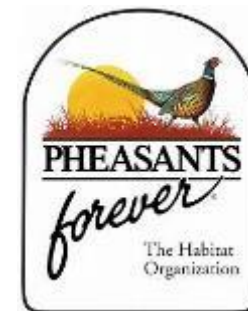
NFWF



Mason State
Nursery



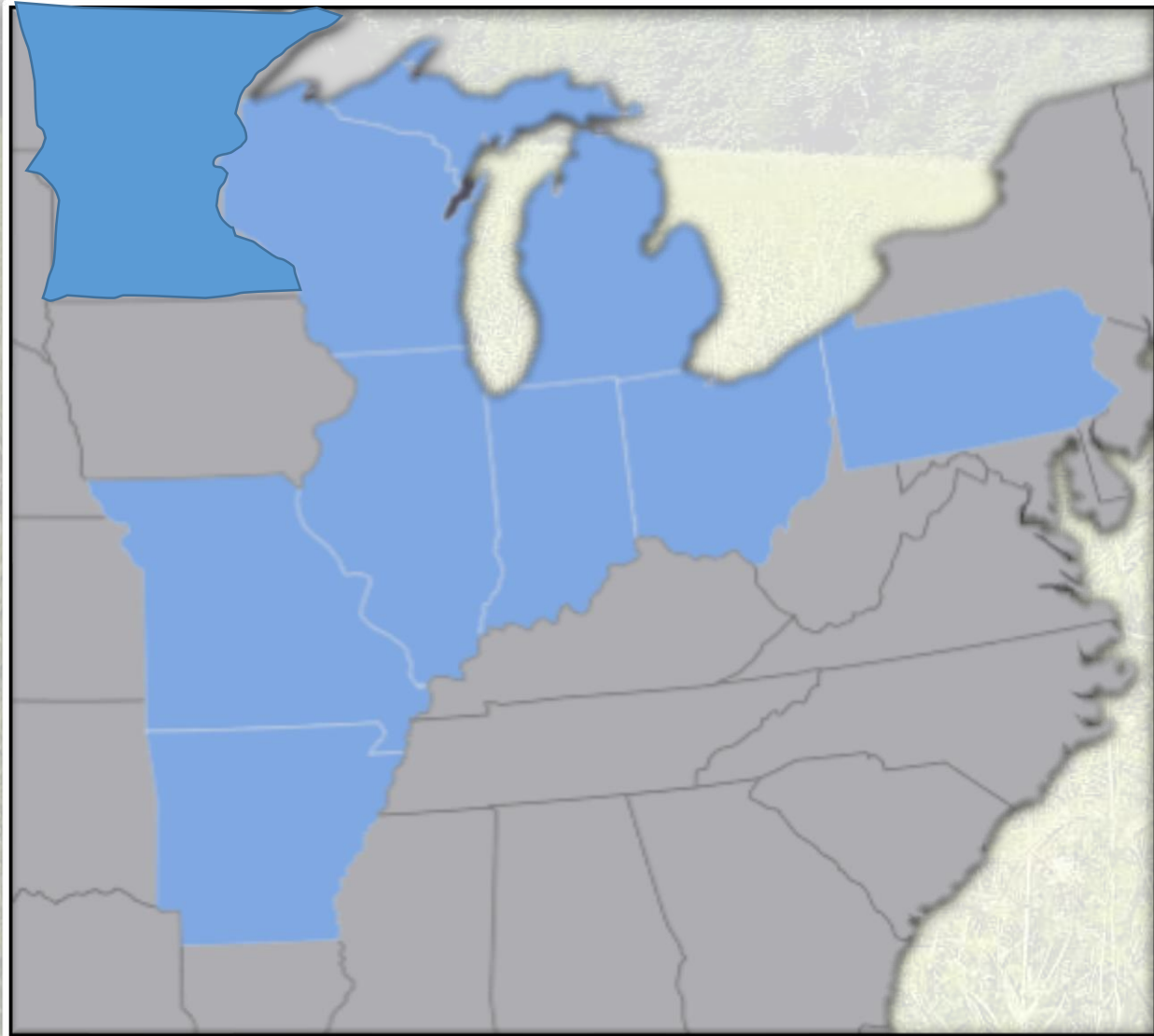
Pennsylvania Natural
Heritage Program



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Increased Habitat and Habitat Connectivity

Arkansas, Illinois,
Indiana, Michigan,
Minnesota, Missouri,
Ohio, Pennsylvania,
Wisconsin



Increased Floral Resources

Refined and Expanded Target Species List

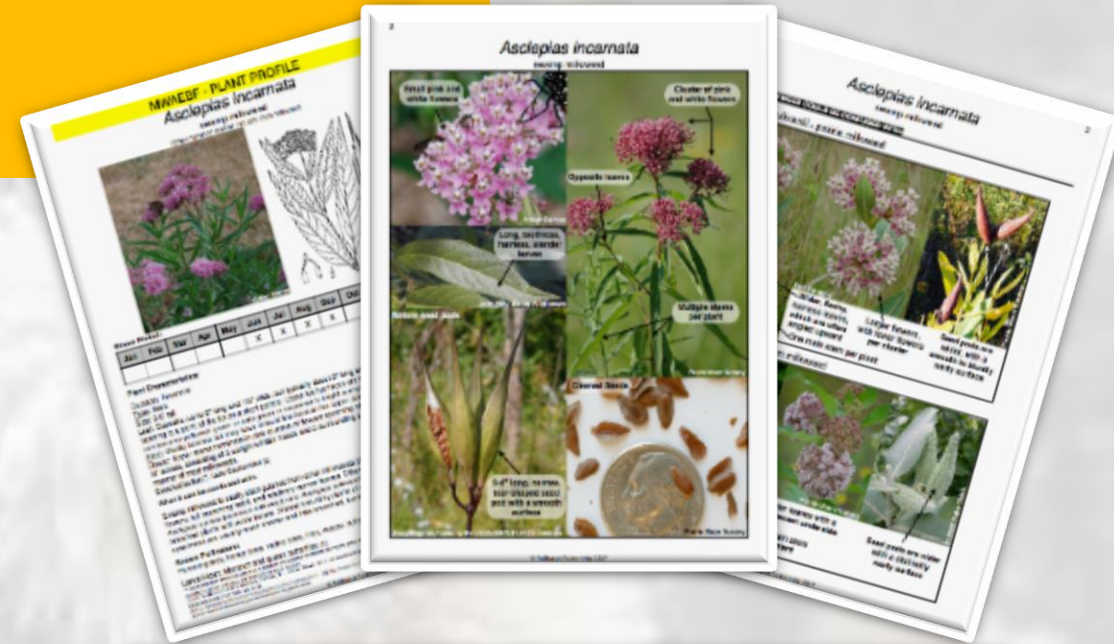
- 29 species inc. 5 milkweed and 1 woody
- Species cover full bloom period
- Species widely distributed
- Common occurrence
- Considered Coefficient of Conservatism
- Vetted by partners and advisors

Latin Name	Common Name	Ja	Fe	M	Apr	Ma	Jun	Jul	Au	Sep	Oct	No	De	Note
<i>Zizia aurea</i>	golden Alexander				X	X	X							
<i>Tradescantia ohiensis</i>	Ohio spiderwort				X	X	X	X						
<i>Geranium maculatum</i>	wild geranium				X	X	X	X						
<i>Penstemon digitalis</i>	foxglove beardtongue					X	X	X						
<i>Cephalanthus occidentalis</i>	buttonbush						X	X	X					
<i>Asclepias syriaca</i>	common milkweed						X	X	X					
<i>Asclepias exaltata</i>	poke milkweed						X	X	X					
<i>Asclepias incarnata</i>	swamp milkweed						X	X	X	X				
<i>Asclepias tuberosa</i>	butterfly weed						X	X	X	X				
<i>Asclepias verticillata</i>	whorled milkweed						X	X	X	X				N/A PA
<i>Rudbeckia hirta</i>	black-eyed Susan						X	X	X	X				
<i>Pycnanthemum virginianum</i>	Virginia mountain mint						X	X	X	X				
<i>Pycnanthemum tenuifolium</i>	narrowsleaf mountainmint						X	X	X	X				
<i>Chamaecrista fasciculata</i>	partridge pea						X	X	X	X				
<i>Ratibida pinnata</i>	yellow coneflower						X	X	X	X				N/A PA
<i>Heliopsis helianthoides</i>	oxeye sunflower						X	X	X	X				
<i>Veronicastrum virginicum</i>	Culver's root						X	X	X	X				
<i>Echinacea purpurea</i>	eastern purple coneflower							X	X	X				N/A PA
<i>Monarda fistulosa</i>	wild bergamot							X	X	X				
<i>Eutrochium purpureum</i>	sweet joe pye weed							X	X	X				
<i>Eupatorium perfoliatum</i>	common boneset							X	X	X				
<i>Liatris spicata</i>	dense blazing star							X	X	X				
<i>Euthamia graminifolia</i>	grass-leaved goldenrod							X	X	X				
<i>Cirsium discolor</i>	field thistle							X	X	X	X			
<i>Liatris aspera</i>	tall blazing star							X	X	X	X			N/A PA
<i>Vernonia gigantea</i>	giant ironweed							X	X	X	X			
<i>Coreopsis tripteris</i>	tall coreopsis							X	X	X	X			
<i>Symphotrichum laeve</i>	smooth blue aster								X	X	X			
<i>Symphotrichum novae-angliae</i>	New England aster								X	X	X			

Volunteer Training

In-person Workshops and Online Training

- Plant identification
- How to scout a population
- Seed collection BMPs
- Viability testing
- Data collection protocol
- How to label, dry, and ship seed



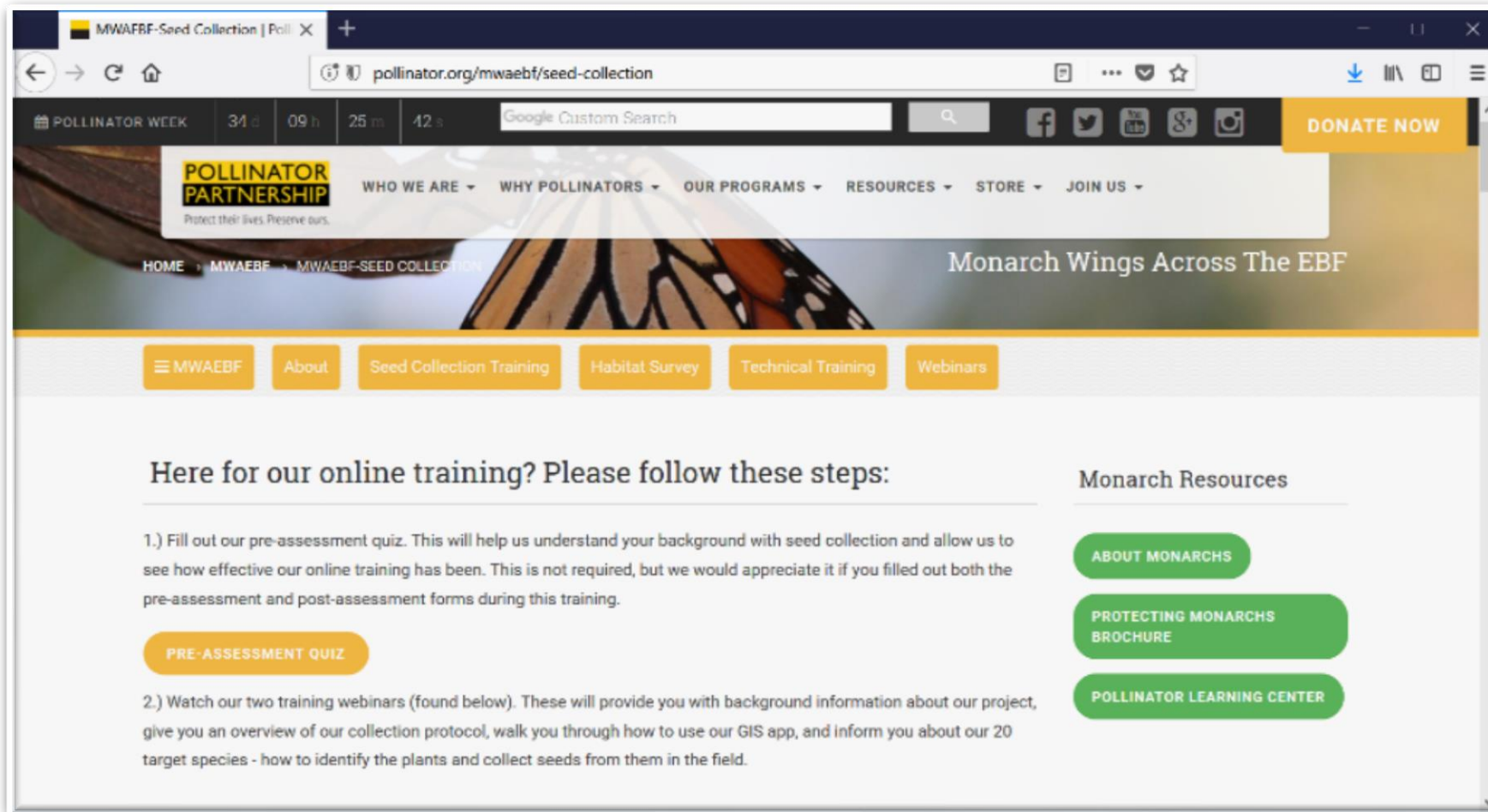
Collection Protocols

Developed from BLM-SOS Guidelines

- Collect from populations in excess of 50 individuals
- Only collect 20% of viable seed (available day of collection)
- Collect widely throughout the whole site
- Aim for high genetic diversity within collections
 - Include plants growing in different microhabitats throughout the site
 - Include plants that differ in appearance, size, stature, etc.
- Come clean, leave clean

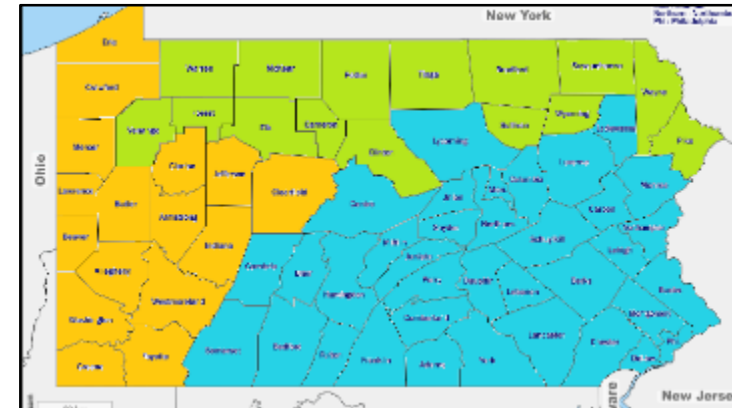
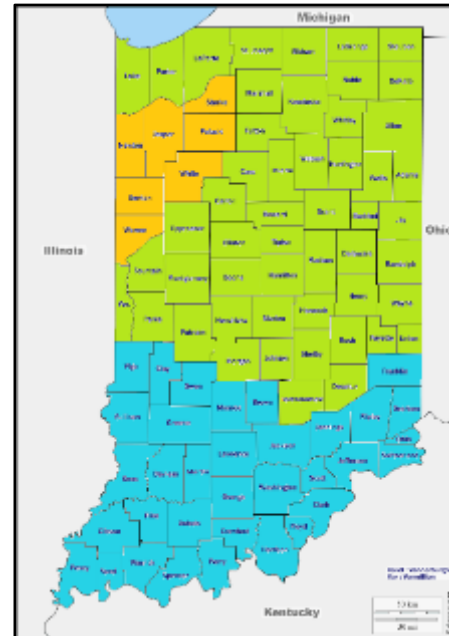


Volunteer Online Training



www.pollinator.org/wingspan/seed-collection

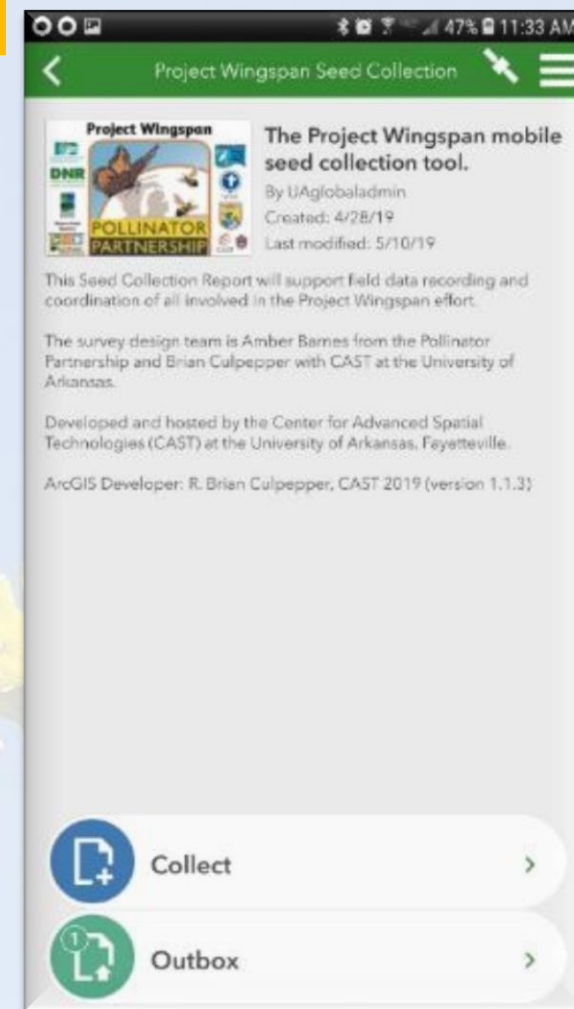
Seed Collection and Redistribution Zones



Data Collection

Survey 123: ArcMap

- **UARK Center for Advanced Spatial Technology**
- **Capture GPS coordinates for seed collections**
- **Database for site and plant photos**
- **Database will help with the seed distribution effort**
- **Providing valuable modeling information to CAST**



Survey 123: ArcMap

[illegible]

Enhance Habitat and Secure Long-term Commitments

Secure a Minimum of 10,000 acres as Long-term Habitat

- Preliminary online habitat survey
- Conduct in-person site visits and work with conservation authorities to confirm habitat
- Collect signed long-term habitat management agreements
- Award seed and plug plant materials



Project Wingspan Habitat Survey *Habitat Wanted!*

Are you interested in pollinator conservation while visually, ecologically, and environmentally enhancing your private or public landscapes? Have you already enhanced your land for pollinators?

If so, **PLEASE TAKE THE SURVEY BELOW** for the chance to be a part Project Wingspan! If chosen, our Pollinator Habitat Coordinator will visit your site, free of charge, to evaluate your habitat landscape. We are seeking sites on public, private, and private working lands in OH, IN, IL, MI, PA, WI. With your help, we can protect imperiled pollinators!

Monarch, Rusty Patched Bumble Bee, and Other Imperiled Native Pollinator Habitat Survey

Thank you for your interest in Pollinator Partnership's Monarch, Rusty Patched Bumble Bee, and other imperiled native pollinator habitat survey! Please fill it out only if you have at least 1 acre of habitat. Participation in this survey may result in a free site evaluation and consultation by our Monarch and Pollinator Habitat Coordinator.

Please note: If your habitat area received an in-person site visit in 2018 and has not added new acreage please do not re-submit this form.

Completion of this survey should take less than 5 minutes.

Monarch Resources

- ABOUT MONARCHS
- PROTECTING MONARCHS BROCHURE
- POLLINATOR LEARNING CENTER

Please Join Us!

- Gain skills and education in native plant and pollinator conservation
- Volunteer requirements for hour criteria fulfilled
- Gain improved understanding of the vegetation community
- Connect to the broader pollinator/wildlife conservation community
- Contribute to a landscape-scale habitat project aimed to restore connectivity of vital native habitat.
- Potential to receive native plant materials and management recommendations for your land

<https://www.pollinator.org/monarch/mwaa>