

**Monarch Wings Across the Eastern Broadleaf Forest Program Summary
2016-2019**

Outreach and Education

Seed Collection Training and Volunteer Network Development:

- A seed collection protocol with accompanying manual, GIS App, and training workshop were developed to teach seed collection BMPs, plant identification, and data collection to volunteers
- 327 volunteers were trained on seed collection protocols through 11 in-person workshops (OH, IN, and IL) and an online training module
- A series of in-depth plant profiles were created for each of the 20 target species to aid with proper field identification and were made available online
- Seed collection teams throughout the target states made 368 collections of the targeted plant species and contributed over 2,792 volunteer hours to program efforts

Habitat Management and Technical Training:

- 175 public agency and private land manager participants took part in 5 in-person Habitat Management and Technical Training Workshops (MO, IL, OH, and IN) to increase knowledge of current BMPs, habitat creation, and long-term habitat management techniques taught by local authorities recognized for their expertise. Workshops focused on Public Lands, Private Working and Agricultural Lands, and Rights-of-Ways and Roadsides.
- Produced a 7-part Habitat Creation and Management webinar series to disseminate information on habitat management BMPs to a broad audience. The 7-part series included modules on monarch biology and ecology, habitat design, site preparation, habitat management from early establishment to long-term practices, roadside habitat management, and managing habitat in ROWs.

Plant Materials

- 100 lbs. of clean seed from 20 species was collected by volunteer collection teams
- 11,447 plugs were grown from collected seed
- Estimated value of volunteer collected seed and plugs grown from collections - \$75,790
- A total of 15,469 plant plugs were installed (including plugs purchased through material grants) of which 2655 were milkweed (*Asclepias syriaca*, *A. incarnata*, *A. verticillata*, *A. tuberosa*, *A. purpurascens*, and *A. sullivantii*).
- An additional \$24,600 was awarded to purchase native seed (including 50 native forb species)

Habitat

- 130 sites were included in the project
- 114 signed long-term habitat management letters were collected
- 27,731 long-term habitat acres were verified and secured through 97 in-person site visits (MO, AR, IL, IN, and OH) and through partnerships with participating agencies and organizations (surpassing original goal of 4,688 ac). This includes: 25,751.75 ac. through in-person site visits (some of which received plant materials for habitat creation &/or enhancement), 270.09 ac. from additional projects that received materials through the program, and 1,709.5 ac. as in-kind contribution from the PFW program.
- 65 projects received habitat materials through the program in IL, IN, and OH (44 received collected materials, 21 received purchased materials or funding for management).
- 691 acres planted in total
- 22 PFW projects received plant materials accounting for 254.75 ac. created or enhanced
- 6 NWRs were given plant materials and funding for management activities (OH-Ottawa NWR; IN-Big Oaks, Muscatatuck, and Patoka NWR; IL-Cypress Creek and Crab Orchard NWR)



Habitat projects awarded enhancement materials including native seed, plant plugs and maintenance funding

Illinois:

Partners for Fish and Wildlife Program (multiple private lands sites including U of I ag Ext Office, Unity Point School District, John Logan Community College)
U.S. National Wildlife Refuges: IL – Crab Orchard, Cypress Creek
Kane County Forest Preserve
Boone County Conservation District
City of Highland Park

Indiana:

Partners for Fish and Wildlife Program (multiple private lands sites)
U.S. National Wildlife Refuges IN – Muscatatuck, Big Oaks, Patoka
US Army Core - Cannelton Lock and Dam
Niches Land Trust
Preservation of the RES
Clear Lake Conservancy
IN DNR (multiple sites including St. Joseph County Parks, Ivy Tech Noblesville Community Garden, and Whitetail Meadows-Mud Creek Conservancy)

Ohio:

Partners for Fish and Wildlife Program (private lands sites including Kelly’s Island School, OSU Western Ag Research Center, and Darke County Parks)
U.S. National Wildlife Refuges OH- Ottawa
Holden Forests and Gardens
Western Reserve Land Conservancy
OH DNR Kelly’s Island
OPHI (Ohio Pollinator Habitat Initiative)

Individuals, organizations, and agencies that participated in habitat survey:

Illinois:

Individual private residences
USFWS – Partners for Fish and Wildlife (PFW)
U.S. National Wildlife Refuges: IL – Crab Orchard, Cypress Creek
Chicago Botanic Garden
ComEd
Kane County Forest Preserve
Boone County Conservation District

Ohio:

Individual private residences
USFWS – Partners for Fish and Wildlife (PFW)
U.S. National Wildlife Refuges OH- Ottawa
Holden Forests and Gardens
Western Reserve Land Conservancy
Cleveland Metro Parks
Cleveland Museum of Natural History
Stan Hywet Trust

Arkansas:

Individual private residences
City of Bullshoals - North Central Arkansas Master Naturalists

Indiana:

Individual private residences
USFWS – Partners for Fish and Wildlife (PFW)
U.S. National Wildlife Refuges IN – Muscatatuck, Big Oaks, Patoka
Hamilton County Parks
US Army Core, Cannelton Lock and Dam
Optimist Club/Sunnyside Master Gardeners
Niches Land Trust
Preservation of the RES
Clear Lake Conservancy
Jennings County School District

Missouri:

Individual private residences
Enable Midstream Partners (AR, IL)
Dept. of Energy – Weldon Spring Site
Missouri Botanic Garden – Shaw Nature Center
Kress Farm Preserve Trust

POLLINATOR PARTNERSHIP

Groups, organizations, agencies, and lands that participated in MWAEBF as seed collection volunteers or sites:

Acres Land Trust	Indiana Master Naturalist Program
Big Oaks Conservation Society	Lake County Parks
Big Oaks National Wildlife Refuge	Merry Lea
Brown County Soil and Water Conservation District	Muscatatuck National Wildlife Refuge
Carmel-Clay Parks	Muscatatuck Wildlife Society
Castalia Quarry Metro Park	Oak Ridge Prairie
Chicago Botanic Gardens	Ohio Pollinator Habitat Initiative
City of Indianapolis - Department of Public Works	Patoka River National Wildlife Refuge
Cypress Creek National Wildlife Refuge	Posey County Soil and Water Conservation District
Eagle Creek Park	Prairie Rivers Network
Friends of the Patoka River National Wildlife Refuge	Purdue Master Gardener Program
Friendship Baptist Church	Purdue Research Park
Fort Wayne Master Naturalists	River Ridge Development Authority
Fowler's Acre	Smith Valley
Gibson Woods	Hamilton County Strawtown Koteewi Park
Goshen College	Wesselman Nature Society
Hamilton County Parks	Western Reserve Land Conservancy
Holden Forests and Gardens	West Park
Hazel Hills	Wild Ones
Hunter Creek	Zionsville Parks and Recreation

MWAEBF Core Program Partners

National Fish and Wildlife Foundation
U.S. Fish and Wildlife Service - Partners for Fish and Wildlife Program
U.S. Fish and Wildlife Service - National Wildlife Refuge System
Illinois Department of Natural Resources - Mason State Nursery
Indiana Department of Natural Resources
Chicago Botanic Garden
Holden Forests and Gardens
University of Arkansas - Center for Advanced Spatial Technology
Ohio Pollinator Habitat Initiative
Pheasants Forever

The Monarch Wings Across the Eastern Broadleaf Forest team would like to express their sincerest gratitude to the seed collection volunteers, project leadership teams, participating land stewards, and the National Fish and Wildlife Foundation for your contributions to this project. Without your time, dedication, support, and enthusiasm for monarch conservation none of this would have been possible!

Thank you!