

Working Lands for Wildlife Monarch Butterfly

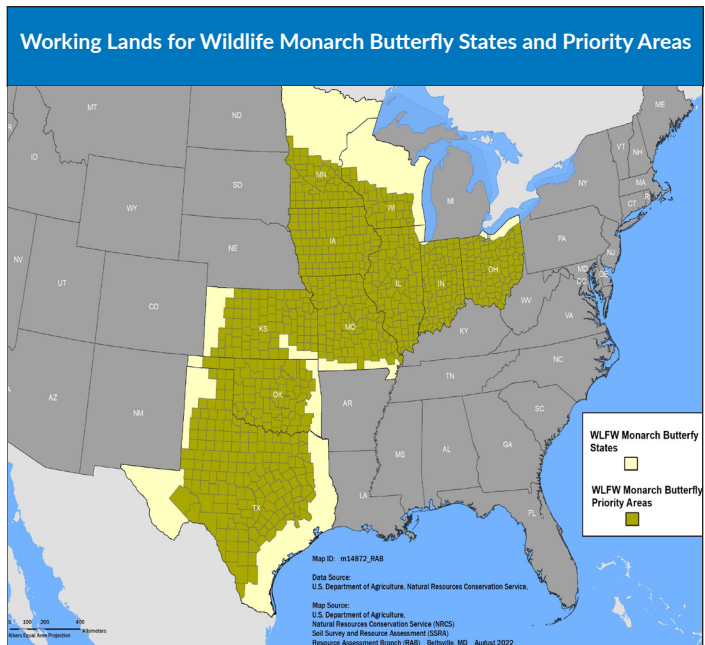
2022 Progress Report

In 2017, the Monarch Butterfly Habitat Development Project was converted into the Working Lands for Wildlife (WLFW) Monarch Butterfly landscape conservation initiative as its ninth national target species. The monarch butterfly (*Danaus plexippus*) is one of the most iconic butterflies in North America and is known in part for its annual multi-generational migration from overwintering sites in central Mexico and coastal California to as far north as Canada. Multiple critical population stressors including the loss and degradation of habitat across the species' range have led to a significant decrease in the number of monarchs in the U.S. over the past few decades. To help address this declining trend, ongoing conservation efforts are focused on establishing and managing monarch habitats in several important regions.

NRCS and the Monarch Butterfly

The agency's primary geographic focus for monarch habitat has been on Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Ohio, Oklahoma, Texas, and Wisconsin, the primary eastern monarch migration corridor in a 10-state area of the central U.S. (see map). While monarchs can benefit from more than three dozen NRCS conservation practices, this 10-state effort targets practices at the heart of the eastern migration corridor within the Midwest and Great Plains. In general, the Midwest habitat strategy is focused on the planting of milkweed and nectar-rich plants to support breeding. In the Great Plains habitat strategy, the effort is focused on improving monarch habitat on existing grasslands to support migration.

Specific conservation activities include increasing the abundance of native milkweed plants (*Asclepias* spp.) – the sole source of food for monarch caterpillars – and the availability of native nectar rich flowers throughout the monarch's range. NRCS is working with America's farmers, ranchers, and forest managers on voluntary conservation efforts to combat the decline of monarchs on private lands by establishing new habitat and managing existing habitat for monarchs (see table).



Working Lands for Wildlife Monarch Butterfly Applied Acres, Obligations, and Contracts: 2016-2022

State	Applied Amount, Acres	Practice Obligation	# of Contracts
Illinois	400	\$205,124	52
Indiana	1,792	\$159,867	33
Iowa	15,476	\$280,418	35
Kansas	391	\$244,058	36
Minnesota	15,475	\$2,091,469	69
Missouri	34,583	\$997,142	169
Ohio	8,912	\$2,280,011	254
Oklahoma	322,307	\$1,892,121	66
Texas	61,085	\$246,490	13
Wisconsin	749	\$418,423	67
Total	461,143	\$8,815,124	794



Monarch adult nectaring on Gregg's Blue Mistflower (*Conoclinium greggii*) in Payne County, Oklahoma.

Science to Solutions

- A study underway with the NRCS Wisconsin State Office, NRCS Science and Technology staff, NRCS' Conservation Effects Assessment Project (CEAP)-Wildlife, and the University of Wisconsin assessed monarch and pollinator habitats and population responses on WLFW Monarch Butterfly conservation sites. Preliminary results demonstrate that easements managed with routine fire and where native seeds are added lead to higher quality prairie plant communities with greater floral resources for pollinators. When there is more milkweed at a site, the number of monarchs increase.
- In a study with Oklahoma State University in collaboration with the Monarch Joint Venture, NRCS is monitoring outcomes of WLFW Monarch Butterfly conservation efforts in the Upper Midwest and Southern Great Plains. Project results will inform the use of the WLFW site evaluation tools used to help landowners make informed decisions about how to manage their land. Ensuring the effectiveness of these tools is critical to achieving the anticipated monarch habitat and population benefits of NRCS conservation activities.