

LANDSCAPE CONSERVATION  
COOPERATIVE NETWORK

The **Field**  
Museum



Photo courtesy of Rachel/ Creative Commons

Monarch butterflies are best known for their mass migration from Canada to Mexico—sometimes traveling up to 3000 miles. Each spring and fall they work their way across North America searching for milkweed to lay their eggs on and nectaring sources to fuel up for their journey. Along the route, the monarch butterfly plays the critical role of a pollinator and ensures our flowers come back next year. Many pollinators, including the monarch butterfly, are in trouble.

Monarch populations have decreased by over 80 percent during the past twenty years. Part of this population loss can be attributed to the drastic decline of monarch habitat—milkweed host plants and nectar food sources—throughout North America. Together, we can save the monarch and other pollinators that also benefit from flowering resources by restoring prairie and wetland habitat, planting natives in our gardens, and protecting the natural spaces that already exist, but it will take everyone to do so. It requires an “all hands on deck” conservation strategy that relies on every land use type to provide monarch habitat.

The role cities can play in monarch recovery—and in providing habitat for pollinators and other wildlife—is more important than previously recognized. In fact, a large metropolitan region such as Chicago has over 16 million stems of milkweed already on the ground, and through strategic outreach with different land users, that number could jump to over 38 million stems. While the prospects for adding more milkweed to the landscape will vary from city to city, the potential for cities to make a difference in monarch conservation is apparent.

Multiple Landscape Conservation Cooperatives partnered with the Keller Science Action Center at the Field Museum in Chicago and the U.S. Fish and Wildlife Service, to answer key questions about how best to conserve monarchs in urban areas located along the monarch's migration flyway. The partnership worked closely with four urban areas along the central flyway: Austin, Chicago, Minneapolis-St. Paul, and Kansas City. Within each urban area information was collected about, the amount and types of potential habitat (from residential backyards to turf-dominated corporate campuses),

how much of this green space is likely to be converted, and best practices for engaging different stakeholder groups to increase the overall amount of habitat. This information was compiled to create mapping tools and an Urban Monarch Conservation Guidebook.

## Products

### General how to:

- Urban Monarch Conservation Guidebook
- Social Science and Outreach:
- Social Survey and Interview Guide (English and Spanish)
- Best practices by land use type
- Guide to creating monarch habitat in your Midwestern garden

### Geospatial tools:

- Urban Milkweed Baseline Tool
- Urban Scenario Planning Tool

### Biological Sampling Protocols:

- Metro transects methodology and sampling protocol
- Natural areas sampling protocol

## Urban Monarch Conservation Guidebook

The Urban Monarch Conservation Guidebook is intended to support the efforts of people like city planners and conservation practitioners who are interested in identifying the best places and methods to create people- and pollinator-friendly habitat in urban areas. All you need to use the Guidebook is a motivation to do something for monarchs, some familiarity with how city space is organized, and comfort with using maps (or know someone who is

comfortable). You can select from a suite of tools and resources that will provide help in developing new habitat or expanding existing habitat as small as backyard butterfly gardens or as large as multi-acre comprehensive prairie restoration.

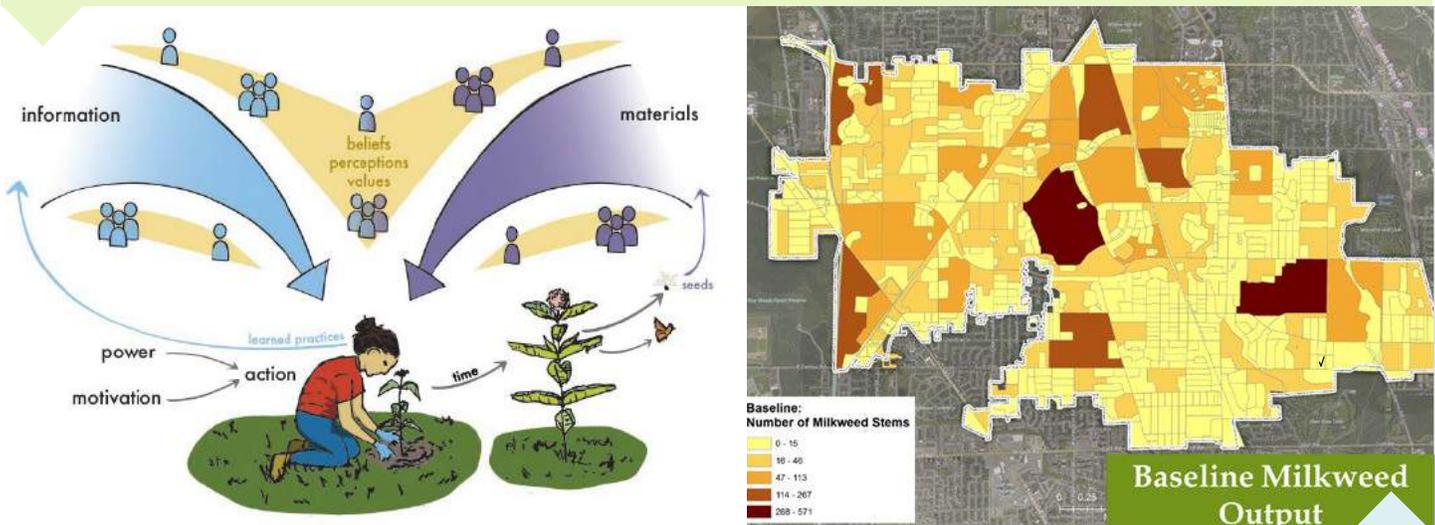
In the Guidebook you will find six sections that walk you through all of the tools created for the project with additional details that can be found in the appendices. If you are wondering how this might apply to your situation the guidebook also walks you through three different scenarios:

- We have just signed the Mayors'

Monarch pledge and are otherwise new to monarch conservation. We are a municipality with a lot of single-family homes. How can the tools help us to prioritize actions?

- We'd like to integrate monarch conservation into other important regional planning discussions such as stormwater management. How do we make the case?
- Our locality has a number of vacant lots. Where should we focus our efforts so that a monarch conservation program has a chance to succeed?

**Figure from Guidebook:** A monarch butterfly "supply chain": What does it take to "produce" a monarch butterfly? Flows of **information** and **materials**, mediated by groups and individuals, make monarch conservation **actions** possible. These flows and exchanges are shaped by the individual and cultural **values**, **perceptions**, and **beliefs** that people bring to their participation in networks. Values, perceptions, and beliefs—which are particularly diverse in cities—motivate people to act on behalf of the monarch. People must also have the **power** to make decisions about a given piece of land in order to take action to make it more habitable for monarchs.



Example map of a smaller town found in the Chicago Metropolitan area that illustrates the output from the Baseline Milkweed Geospatial Tool.

## Mapping and Analytical Tools

Two mapping tools to help municipalities set goals and priorities for establishing monarch habitat were created. The first is the Urban Milkweed Baseline Tool which provides an estimate of existing milkweed density and stem count for a metropolitan area. This helps a you understand what a city is currently doing for the monarch. This tool creates a snapshot in time, but can be updated to reflect the work done in the community. The second tool available

is the interactive Urban Scenario Planning Tool which allows users to model anticipated increases in milkweed density and total stem count for any sub-geography based on user scenarios across land-use types. Your local partnership can look at your town and understand where there are opportunities for working with different land uses to convert a small portion of their land to multi-beneficial habitat. This tool helps marry your local needs with creating wildlife habitat; so you have something that is not just good for wildlife, but for people too!

### For more information

<https://tallgrassprairiefcc.org/issue/monarch-butterflies>

<http://fieldmuseum.org/monarchs>

Contact:

Kelley Myers, Tallgrass Prairie LCC  
Coordinator

[kelley\\_myers@fws.gov](mailto:kelley_myers@fws.gov)

515-401-4403