

RIGHTS-OF-WAY AS HABITAT WORKING GROUP

POLLINATOR SCORECARD

V 2.1 – 2020 EDITION



ACKNOWLEDGMENTS

The Rights-of-Way as Habitat Working Group and Metrics & Targets Task Force would like to thank the following organizations for their generous contributions throughout the development of the Pollinator Scorecard, ranging from financial support and in-kind time and technical expertise to document review, field testing, and participation in workshops. This document was prepared by Cardno, Environmental Incentives, and the Energy Resources Center at the University of Illinois, Chicago with technical review by Monarch Joint Venture, Pennsylvania State University, and Wildlife Habitat Council.

Financial Support



Technical Team



Oversight Team

American Electric Power
American Transmission Company
Arbor Metrics
Arizona Department of Transportation
Clearion
East Central Energy
Electric Power Research Institute
Federal Highway Administration
Field Museum
FirstEnergy
Fresh Energy
Huff & Huff, Inc.

Idaho Transportation Department
Illinois Tollway
Indiana Department of Transportation
IVM Partners
Kentucky Transportation Cabinet
Maine Department of Transportation
Minnesota Department of Transportation
NiSource
New York Power Authority
NextEra Energy
Occidental Chemical Corporation

Contents

Introduction	1
What is Pollinator Habitat?	1
What Does the Pollinator Scorecard Do?	1
Who Uses the Pollinator Scorecard?	2
Where Can the Pollinator Scorecard Be Used?	3
Alternative Assessment Protocols	4
When Should the Pollinator Scorecard Be Used?	5
How Long Does It Take?	5
What Information Does the Pollinator Scorecard Provide?.....	6
Habitat Quality Ratings	6
Management Ratings.....	7
Combining Habitat Quality and Management Ratings	7
Pollinator Habitat Assessment Protocol	8
Materials Required	8
Using Survey123	8
Habitat Assessment Instructions	8
H-1. Set Up Site Assessment.....	8
H-2. Record Site Data	9
H-3. Collect Plot-Scale Data	10
Questions	14
Pollinator Management Module Protocol.....	15
Rationale	15
Who Completes the Management Module?	16
How Many Management Module Evaluations Do I Complete for a Site?	16
Management Module Instructions.....	17
Description of Scoring.....	20
Questions	21
Continuing the Journey	22
Practice Adaptive Management.....	22
Participate in Citizen Science	22
Apply for Certifications	23
Wildlife Habitat Council Conservation Certification®	23
Right-of-Way Stewardship Council Accreditation	23
Monarch Waystation	24
Monarch Candidate Conservation Agreement with Assurances	24
Share your Success	25

Introduction

The Rights-of-Way as Habitat Working Group Metrics & Targets Task Force proudly presents the Pollinator Scorecard. The Pollinator Scorecard allows rights-of-way (ROW) managers to describe the pollinator habitat on the lands they manage. A common definition of pollinator habitat, coupled with a consistent methodology for evaluating pollinator habitat and management, will allow collaboration between Rights-of-Way as Habitat Working Group members to support pollinator habitat on ROWs and other energy and transportation lands.

The purpose of the Pollinator Scorecard is to:

- Provide a **common language** to talk about habitat on energy and transportation lands in order to facilitate industry learning and collaboration
- Establish a **consistent valuation** method across ROW sectors that aligns with existing habitat assessments and reporting
- Provide a **flexible, multi-tiered approach** that encourages improved monitoring over time
- Support **shared reporting** of habitat metrics across industries

The Pollinator Scorecard may also be used to meet the monitoring requirements for organizations participating in the Nationwide Candidate Conservation Agreement for the Monarch Butterfly on Energy and Transportation Lands (i.e., Monarch CCAA).

What is Pollinator Habitat?

For the purposes of the Pollinator Scorecard, pollinator habitat is defined as:

Pollinator habitat contains native flowering plants, host plants, and nesting sites, throughout the growing season.

Pollinator habitat may be remnant natural habitat, habitat enhanced through management, or newly created habitat. Flowering plants are important because they provide floral resources including nectar and pollen to pollinators. A greater diversity of (or dominance by) native plants provides a greater diversity of floral resources and host plants (such as for butterflies) and nesting sites (such as for native bees). While non-native plants may provide some resources for pollinators, native plants provide other ecosystem services including soil stabilization, water quality improvements, and habitat for birds and other wildlife, and are persistent and typically less costly to maintain for long-term sustainability. A healthy pollinator habitat is commonly defined as having **three or more** native plant species in bloom during each of the spring, summer, and fall periods, as applicable by region.

What Does the Pollinator Scorecard Do?

The Pollinator Scorecard evaluates habitat quality and the compatibility of management on pollinator habitat. The Pollinator Scorecard includes two components:

- (1) **Pollinator Habitat Assessment Protocol:** used to collect data on pollinator habitat attributes in the field
- (2) **Pollinator Management Module:** used to evaluate the extent to which management protects pollinator habitat from threats and leverages opportunities to promote pollinator habitat.



The Pollinator Scorecard is designed for flexibility with an understanding that energy and transportation organizations may have different objectives for using the Pollinator Scorecard and varying levels of access to resources and expertise for pollinator habitat assessment. Therefore, the Pollinator Scorecard was designed with a multi-tiered approach to support a range of users in evaluating habitat (Table 1).

Table 1. Overview of the multi-tiered approach of the Pollinator Scorecard

	Tier 1: Basic	Tier 2: Qualitative	Tier 3: Detailed
Information Gained	Is habitat for pollinators present?	What is the quality of pollinator habitat?	What is the composition (by plant species) of the pollinator habitat?
Metrics	<ul style="list-style-type: none"> ▪ Flowering nectar plant cover ▪ Milkweed presence ▪ Pollinators observed 	<ul style="list-style-type: none"> ▪ Flowering nectar plant cover ▪ Abundance of milkweed ▪ Currently blooming nectar plants ▪ Additional habitat resources ▪ Pollinators observed ▪ Threats and opportunities 	<ul style="list-style-type: none"> ▪ Flowering nectar plant cover ▪ Abundance of milkweed ▪ Flowering nectar plant richness (native and non-native) ▪ Additional habitat resources ▪ Invasive/noxious weed cover ▪ Pollinators observed ▪ Threats and opportunities
Level of Effort	5 – 10 minutes per plot	10 – 20 minutes per plot	20+ minutes per plot
Qualifications Needed	Some familiarity with pollinator habitat or minimal training	Ability to distinguish nectar plants and count milkweed	Ability to identify plants to species level
Outcome	“Yes/No” habitat determination	Qualitative rating of pollinator habitat and management score	Qualitative rating of pollinator habitat; list of species present and metrics per species for nectar plants, milkweed, and invasive/noxious weeds; and management score

In both Tier 2 and Tier 3, information is collected on the threats and opportunities for use in the Pollinator Management Module. See the *Pollinator Management Module Protocol* for instructions on using the management module.

Who Uses the Pollinator Scorecard?

The Pollinator Scorecard includes multiple tiers to allow users of differing training and experience levels to evaluate pollinator habitat (see Table 1, above). The Pollinator Scorecard, as a package, is primarily



intended for organizations that manage energy or transportation ROWs and related lands. Different users may use different components of the Pollinator Scorecard for a single site or management area. For example, a transportation agency may use student interns to complete the Pollinator Habitat Assessment Protocol across their system, while the Pollinator Management Module may be completed by the local vegetation management departments. The Pollinator Management Module must be used by someone familiar with the management practices on the particular site or land area (see the *Pollinator Management Module Protocol* section for more specific requirements). The qualifications required to use the Pollinator Habitat Assessment Module will differ by tier:

- **Tier 1:** Tier 1 is intended for anyone with minimal training. Required qualifications include the ability to:
 - recognize potentially flowering nectar plants (e.g., wildflowers and shrubs);
 - estimate percent cover of potentially flowering nectar plants sufficiently to distinguish between plots with greater than 10% cover and less than 10% cover; and
 - recognize milkweed plants.
- **Tier 2:** with some training, Tier 2 may be used by most users. Required qualifications include the requirements of Tier 1 users as well as the ability to:
 - estimate percent cover within broad bins (e.g., 6 – 10% cover, 10 – 25% cover, etc.);
 - recognize flowering plants currently in bloom;
 - recognize habitat resources used by pollinators (e.g., brush piles, bare ground); and
 - identify management threats and opportunities (if using the Pollinator Management Module).
- **Tier 3:** Tier 3 is intended for more advanced users. Required qualifications include the requirements of Tier 2 users as well as the ability to:
 - Identify most plants to species, especially native and non-native nectar plants.

Tiers 1 and 2 are intended to be used by anyone, but note that successfully completing a Tier 2 assessment requires more training and time than a Tier 1 assessment. Tier 3 should only be used by those with some botany experience.

Where Can the Pollinator Scorecard Be Used?

The Pollinator Scorecard may be used to evaluate pollinator habitat and management on ROWs and other lands for multiple sectors within the contiguous United States. Users may use the Pollinator Scorecard anywhere they wish to describe pollinator habitat, whether or not there is known pollinator habitat present. The scorecard may also serve as a tool in areas being considered for enhancement by management. Or users may like to use the scorecard when they encounter pollinator habitat while monitoring ROW corridors for routine vegetation management, stopping periodically to characterize a segment of corridor.



To evaluate a specific site or management area, the user must first delineate the boundaries of the assessment area. A **site** is an individual area in which the user is interested in characterizing habitat. The user may also wish to characterize habitat across a larger **management area**, or a system of lands or sites managed through similar practices. A **plot** is a 1,500 square foot rectangle or circle in which pollinator habitat data are collected. Multiple plots are used to characterize a site or management area.

The number and frequency of plots used will be dictated by the user's objectives. The more plots used, the greater the 'resolution' of data on pollinator habitat and thus the more useful the assessment will be in characterizing the site or management area and informing future management actions. In general, as the assessment area increases, the number of plots sampled should also increase. Higher variability within the site or management area will require more plots to have confidence that the assessment area was accurately characterized. Also consider the spacing between plots—the less distance between plots, the less uncertainty in the habitat quality between the plots, in general. Statistical methods can be used to more accurately calculate the number of plots required for any site¹.

Detailed instructions for distributing plots are provided in the *Pollinator Habitat Assessment Protocol* section. In most cases, plots should be distributed in a random or systematic way to eliminate bias in characterizing habitat. However, in some circumstances, users may wish to use a 'representative' plot to characterize a site. Representative plots are placed subjectively in a place that best represents the habitat according to the judgement of the assessor. Representative plots can provide a rapid characterization of a specific, small site, but are generally not appropriate for larger sites (e.g., greater than 1 acre in size). Data from representative plots should not be pooled with data from randomly or systematically placed plots to characterize larger areas. If using the Pollinator Scorecard to meet the monitoring requirements of the Monarch CCAA, please note that plot locations **must be randomly selected** (see Section 14.2 of the Monarch CCAA for more details).

Alternative Assessment Protocols

The Pollinator Scorecard was developed after careful review of many similar assessment methods for pollinator habitat. It's important to note that the Pollinator Scorecard may not be the best method for assessing pollinator habitat in all circumstances. Users should consider their objectives and the specific

Definitions

Site – An individual area over which habitat will be characterized. Sites may consist of a single pollinator planting or a section of right-of-way corridor.

Management Area – A system of lands on which similar management practices are implemented and for which habitat will be characterized. Management areas may consist of an entire right-of-way corridor or collection of sites.

Plot – A 1,500 square foot area within which an assessment is conducted. A plot is typically a 150 x 10 foot rectangle or 22 foot radius circle. Multiple plots are used to characterize a site or management area.

¹ See the reference [Measuring & Monitoring Plant Populations](#) published by the Bureau of Land Management, U.S. Department of Interior for an approachable treatment of this topic.



attributes of the site. For example, state solar scorecards may be better suited for assessing pollinator habitat in solar facilities and the [Integrated Monarch Monitoring Protocol](#) may be best for detailed evaluation of monarch habitat specifically.

When Should the Pollinator Scorecard Be Used?

The Pollinator Scorecard was designed with an understanding that ROW managers are generally unable to visit assessment areas multiple times per year due to resource constraints. Thus, the Pollinator Scorecard is designed to provide a reasonable representation of the assessment area with a single visit during the growing season. However, to best understand the value of a site for pollinators, information is needed regarding the availability of nectar for pollinators throughout the year. Therefore, we collect information for all ‘Potentially Flowering Nectar Plants,’ which include wildflowers (forbs) and flowering shrubs (i.e., excluding grasses), that could provide nectar to pollinators, regardless of whether or not those plants are blooming on the date of assessment and whether the plants are considered weedy. ‘Potentially Flowering Nectar Plants’ are defined as:

Potentially flowering nectar plants include all flowering plants that can provide available nectar for pollinating insects at some point throughout the growing season, including primarily forbs that (at the time of monitoring) have already, are currently, or not yet bloomed.

For best results, the site should be evaluated during peak blooming season, which will vary by region. Some regions, especially hotter and drier regions of the U.S., will experience two peak blooms per year, in which case users may wish to evaluate a site twice per year. Ideally, all plots will be collected within a brief window of time (e.g., within a few weeks), which will allow better comparisons of habitat across sites. The Pollinator Scorecard may be used multiple times per year on the same site if desired.

To evaluate changes over time, users may wish to revisit specific plots in subsequent years. In this case, the same plot locations should be revisited if possible. If use of permanent markers is not feasible, collect plot location information as accurately as possible, either with a GPS unit or through clear description of the plot location in reference to permanent landmarks.

The Pollinator Management Module may be completed at any time of year following the site assessments.

How Long Does It Take?

The length of time required for site assessments depends on the size of the assessment area and the number of plots sampled. Time to collect data within each plot depends on the protocol tier, and ranges from less than five minutes to 20 minutes or more. Also consider the time required to travel between plots when collecting multiple plots.

As an example, evaluating a one-mile length of right-of-way (ROW) with vehicle access using five plots and the Tier 2 protocol may require 75 minutes of assessment time (15 minutes per plot) plus 50 minutes of driving time (10 minutes between plots) for a total of approximately 3 hours. Note that total times may vary significantly based on a number of factors—with some experience users will better understand the time required for their needs and will become faster at data collection.



What Information Does the Pollinator Scorecard Provide?

The Pollinator Scorecard will provide information on the location and abundance of pollinator habitat as well as the suitability of management practices to promote pollinator habitat.

Habitat Quality Ratings

After completing the Pollinator Habitat Assessment Protocol for Tier 2 and 3, a habitat quality rating is provided for each plot. The habitat quality rating is associated with the score received and the tier used. The Tier 3 protocol will provide more accurate habitat quality ratings than the Tier 2 protocol due to the additional information available for scoring with the Tier 3 protocol. In addition, the total number of points possible for Tier 3 is greater than Tier 2 to emphasize the level of effort and accuracy of using the Tier 3 protocol. However, in general, Tier 2 and Tier 3 should provide similar habitat quality ratings for the same site. If evaluating both tiers at a particular site, some exceptions may occur for sites scoring at the margins of scoring ranges. These variations are expected as a result of the differing tiers of information required. If both Tier 2 and Tier 3 have been evaluated at a site, the Tier 3 score is generally considered as being more accurate as a result of the increased understanding of site conditions.

Table 2. Habitat Quality Ratings and Interpretation

Rating	Tier 2 Point Range	Tier 3 Point Range	Interpretation
Improvement Opportunity	0 - 25	0 - 20	Pollinator habitat is either not present or very limited. Consider creation of habitat for pollinators if opportunities exist.
Basic Quality	26 - 40	21 - 35	Some components of pollinator habitat are present but limited. Consider enhancement through revegetation or changing vegetation management.
Moderate Quality	41 - 55	36 - 50	The habitat is capable of supporting pollinators. Habitat may be enhanced or maintained, depending on opportunities present.
High Quality	56 - 75	51 - 75	High-quality habitat is present. Focus on maintaining habitat quality.
Exemplary	N/A	76 – 110	Habitat is exemplary quality. Congratulations! Share your site as a showcase to educate others about habitat potential.

While ROWs and other energy and transportation lands provide an important opportunity for supporting pollinators, habitat on these lands may not be as high in quality as on remnant prairie, prairie restorations, or similar areas. Thus, the ratings are tailored to provide meaningful information based on the range of habitat qualities expected in ROWs and related lands.

Tier 1 does not yield a habitat quality score. The results of Tier 1 are intended to verify that the basic elements of habitat are present, and to align with the required monitoring variables for the Monarch



CCAA. While this provides an important tool for compliance with requirements of that agreement, the information gained cannot be used to infer habitat quality.

Management Ratings

The management module evaluates the suitability of management for pollinator habitat if present on each plot or site. After completing the Management Module, a management suitability rating is provided. Management suitability ratings are described in Table 3.

Table 3. Management Ratings and Interpretation

Qualitative Ratings	Score
Needs Improvement	0-18
Some Needs Met	19-30
Satisfactory	31-42
Great	43-54
Exemplary	55-60

Combining Habitat Quality and Management Ratings

The Pollinator Scorecard provides ratings for habitat quality and management separately so that users can understand each component and interpret the results both individually as well as collectively when appropriate. Targeted management of low-quality habitat may result in improved habitat quality over time and may be the best that a manager can do. Conversely, unsuitable management of high-quality habitat may minimize the benefits that the habitat provides to pollinators. Both the habitat quality and management ratings should be considered together when evaluating current and potential habitat onsite.

Pollinator Habitat Assessment Protocol

This section provides step-by-step instructions for setting up and completing the Pollinator Scorecard in the field.

Materials Required

The habitat assessment may be completed with just the datasheet, a clipboard, and pen/pencil in most cases. The datasheets are also available in electronic format, either as a fillable PDF file or using the Survey123 application (see below). Ensure you have permission, documented as required, and safety equipment depending on the type of right-of-way to be assessed. Other items, including a GPS, measuring tape, clicker counter, and guidebooks are helpful but not required.

1. Permit or permission for access to the right-of-way from proper authority
2. Safety clothing (Type 3 vest in some states), helmet (required in some states or if desired)
3. Revolving or flashing light for top of car, if required
4. Datasheets (in paper or electronic format)
5. Clipboard and pen/pencil, if using paper datasheets
6. GPS unit, GPS enabled tablet, or smartphone* (for navigating to plots or collecting plot locations)
7. Measuring tape*
8. Clicker counter* (for tallying milkweed)
9. Pin flags* (for marking plot corners)
10. Plant identification guidebook or aides*
11. Pollinator identification guidebook or aides*
12. Hand lens or magnifying glass* (for identifying plant parts)

* Optional items

Using Survey123

The Tier 1, 2, and 3 datasheets are available in electronic format via the Survey123 application to all organizations registered in the [Rights-of-Way as Habitat Geospatial Database](#). Once sent, the data collected in Survey123 is automatically synced to the geospatial database for ease of tracking and reporting. Users may opt to use paper datasheets to collect supplemental information, e.g., Tier 3 Plant Species Worksheet.

Habitat Assessment Instructions

Follow the instructions below to complete a habitat assessment using the Pollinator Scorecard.

H-1. Set Up Site Assessment

- H-1.1. **Define the boundaries of the assessment area:** The assessment area (i.e., site or management area) is the area within which the user is interested in characterizing habitat. It may range in size from a single pollinator planting to an entire ROW corridor.

For linear ROWs, note the beginning and ending points of the assessment area. For non-linear features, define the polygon representing the area of interest on an aerial map of the site. If using the Rights-of-Way as Habitat Geospatial Database, the details and



geographic boundary for sites and management areas can also be defined electronically using the Collector for ArcGIS app.

Plots will be distributed within the assessment area boundaries.

- H-1.2. **Estimate the assessment area:** The area of the site or management area will inform the number of plots required as well as permit calculation of other parameters, such as milkweed density, from plot-scale data. Using best estimates, note the total assessment area; it will be recorded on the datasheet.
- H-1.3. **Determine the number of plots required:** The number of plots required will depend on the objectives of the assessment and resources available.
- H-1.4. **Distribute the plots over the assessment area:** First, determine whether plots will be distributed randomly, systematically, or representatively:
- **Random** plot locations are best for large, non-linear sites or management areas. Use a GIS or random number generator to generate point locations within the site or management area that will serve as the starting corner locations for plots. Load those plot locations into a GPS unit, if available, or mark on an aerial image. Random plot locations allow for characterization of very large sites or management areas.
 - **Systematic** plot locations—in which plots are taken at set intervals along a site or management area—are ideal for long, linear ROWs. Simply specify a starting location along the ROW, a distance from the feature to begin the plots, and a distance to travel between plots such that the number of plots desired will be collected (e.g., start at mile marker 8, 12 feet from the centerline, and collect plots every quarter mile). Systematic plot locations also allow for characterization of very large sites or management areas.
 - **Representative** plots may be used when a specific, small patch of habitat is being assessed. Note that representative plot data generally should not be used for large sites (greater than 1 acre in size) and should not be pooled with random/systematic data to characterize larger sites or management areas. Representative plot locations may not be used for the purposes of monitoring for the Monarch CCAA (see section 14.2 of the Monarch CCAA).

H-2. Record Site Data

- H-2.1. **Record site data on the datasheet:** Record the Site (or Management Area) Name, ROW Organization, Assessor Name, Assessor's Affiliation, Total Area of Site or Management Area (in acres), Monitoring Type and Survey Type on the top of the datasheet. If step H-1 was completed in the office and multiple plots will be collected across the assessment area, you may wish to pre-fill this information before printing field datasheets.



H-3. Collect Plot-Scale Data

- H-3.1. **Navigate to the first plot:** Using the plot location information created during step H-1.3, navigate to the first plot location. If using a representative sample, plot location will not be provided. Instead, identify an area that represents the site and begin the plot there.
- H-3.2. **Record plot data on the datasheet:** Observe the plot from the starting point and record the plot number and plot corner location (as latitude/longitude coordinates (*preferred*) or in relation to permanent landmarks). Provide a brief description of the plot, including the type of ROW (if applicable) and ownership status (i.e., owned or easement).
- H-3.3. **Take photos:** Take photos of the plot and record the photo number or other identifying information on the datasheet such that photos may be matched with the corresponding plots in the office. This step is optional but highly recommended.
- H-3.4. **Establish the plot:** The plot will be a 1,500 square foot area. Use a rectangular plot if possible; 150 x 10 ft is recommended. If the site is too small, or configuration does not allow for a rectangular plot, a 22 ft radius circle may be used. Regardless of plot shape, it is important to maintain a consistent sampling area of 1,500 square feet.

If using a rectangular plot on a ROW corridor, orient the long side of the plot parallel, perpendicular, or diagonal to the ROW (or spin a pen/pencil to obtain a random direction if the site is not a linear ROW). Consider orienting the long axis of the plot across the width of the corridor to encompass the greatest expected variation in the vegetation. Note your starting position (use a pin flag if desired) and walk the length of the plot along its edge to the opposite end. When first beginning assessments, observers should use a measuring tape to measure the length of the plot; once calibrated, observers can pace. Re-calibrate at the beginning of a new field season and occasionally throughout.

- H-3.5. **Record the primary adjacent land uses (Tier 2 & 3 only):** Record the land use type directly adjacent to the site or management area that borders the majority of the length of the plot. If different land use types are located on either side of the site or management area, select up to two adjacent land uses per plot (one for each side). If multiple land uses are adjacent to the plot on one side of the site or management area, select the dominant land use type. See Table 5 for land use definitions.
- H-3.6. **Record habitat attribute scores:** Return to the starting point of the plot using a meandering or zig-zag pattern, observing habitat attributes within the plot (Figure 1). Attributes will vary by tier. See Table 4 *Attribute Definitions* (below) for definitions of each attribute. Note that Tier 3 also includes a Plant Species Worksheet that should be completed.

		Tier 1	Tier 2	Tier 3
Plot Number	A unique identifier for the plot	•	•	•
Plot Location	The coordinates of the plot and/or sufficient information to re-identify the plot in subsequent visits	•	•	•
Plot Description	A general description of the plot, including the type ROW it is located in, the ownership status (owned or easement), etc.	•	•	•
Photos	Photo names, numbers or other identifying information	•	•	•
Adjacent Land Uses	The land use type directly adjacent to the of site or management area that borders the majority of the length of the plot. If different land use types are located on either side of the of site or management area, select up to two adjacent land uses per plot (one for each side). If multiple land uses are adjacent to the plot on one side of the of site or management area, select the dominant land use type. See Table 4 for adjacent land use definitions.		•	•
Habitat Attributes				
More than 10% cover potentially flowering nectar plants?	Indicate ‘yes’ if the plot contains more than 10% cover of potentially flowering nectar plants (e.g., wildflowers and shrubs), whether flowering or not.	•		
Numerous milkweed stems present?	Indicate ‘yes’ if the plot contains the target defined for milkweed stems based on your region. ²	•		
Potentially Flowering Nectar Plant Cover	Estimate the percent cover of potentially flowering nectar plants (e.g., wildflowers and shrubs), whether flowering or not; select the appropriate category.	○	•	•
Additional Habitat Resources	Check any habitat resources that are present. If unsure, note what was observed.		•	•
Number of Flowering Nectar Plant Species Currently in Bloom	Count the number of distinct types of flowers observed in the plot which are in bloom. Distinct types of flowers means flowers of different wildflower or shrub species.		•	
Abundance of Milkweed	Count the number of milkweed stems observed in the plot. In addition to <i>Asclepias</i> species, also	○	•	•

² The minimum target needed will vary depending on which part of the U.S. you are sampling within. The West and South regions of the U.S. have a minimum target of 2 or more milkweeds per plot. The Midwest and Northeast have a target of 6 or more milkweeds per plot. Verify your region using the inset maps included in each Tier 1 scorecard version, or within the Monarch CCAA, or by selecting the appropriate geographic region on the Survey123 form.



		Tier 1	Tier 2	Tier 3
	include honeyvine, <i>Cynanchum laeve</i> . For Tier 3 only, use the Plant Species Worksheet, which optionally includes plant count in addition to stems. Count a plant as a single stem (e.g., common milkweed, <i>Asclepias syriaca</i> , ignoring possible below ground connections); or a plant may be multiple stems originating from the same central location in the soil (e.g., green antelope horn, <i>A. asperula</i> , or butterfly weed, <i>A. tuberosa</i>).			
Actual Milkweed Stem Count	Record the exact count of milkweed stems (<i>Asclepias spp.</i> and <i>Cynanchum leave</i>). This information is especially useful for plots with high milkweed stem counts (greater than 50 stems). For Tier 3, stem counts per species are recorded in the Plant Species Worksheet.	o	o	•
Number of Nectar Plant Species	Count the number of unique nectar plant species identified in the plot; select the appropriate category. Use the Plant Species Worksheet.			•
Number of Native Nectar Plant Species	Count the number of unique native nectar plant species identified in the plot; select the appropriate category. Use the Plant Species Worksheet and note how the status of a plant as native was determined (e.g., USDA plant lists).			•
Invasive Species & Noxious Weed Cover	Estimate the percent cover of invasive species and noxious weeds in the plot. Use the Plant Species Worksheet and note how the status of a plant as noxious or invasive was determined (e.g., county noxious weed list).			•
Pollinators Observed	Check for any pollinators observed while surveying the plot. Pollinators need not be located within the plot to be counted.	o	•	•
Threats	Check for any threats identified on or adjacent to the plot. If other, describe.		•	•
Opportunities	Check for any opportunities identified on or adjacent to the plot. If other, describe.		•	•
Additional Notes and Observations/Recommendations	Capture other relevant information to inform the habitat assessment and/or future work (e.g., vegetation management, assessments, etc.)	o	o	o

Key: • required; o optional



Table 5. Adjacent Land Use Descriptions

Cropland	Currently or recently used for agricultural production. Will vary by region. Excludes Conservation Reserve Program and other agricultural set-asides.
Developed	Includes pavement, buildings, lawn, landscaping and other features associated with urban, suburban, or ex-urban development.
Woodland	Woody or brush-dominated.
Wetland	Areas characterized by standing water during parts of the year and associated with wetland vegetation (e.g., cattails, rushes).
Grassland (Diverse)	Includes native or restored grassland or prairie remnant, wildlife areas, etc., and CRP with bunchgrasses and forbs present.
Grassland (Non-diverse)	Includes open space, heavily grazed lands, hayfields, recreation fields, golf courses, and CRP dominated by a single grass species.

Table 6. Additional Habitat Resources

Native bunch grasses	Group of grass species in <i>Poaceae</i> family that grow in a single, dense tuft of vegetation (e.g. purple three-awn, blue grama).
Brush piles	Mound or pile of woody vegetation, including brush and loose branches, on top of a base comprised of larger logs or other natural materials.
Undisturbed thatch	Loosely interwoven layer of dead and living shoots, stems, and roots.
Dead wood/snags	A standing, dead, or dying tree, often missing a top or most of its smaller branches.
Rock piles	A pile of rocks or boulders in which the largest rocks are on the bottom of the stack, which provides opportunities for shelter.
More than 1 sq. ft bare ground	More than 1 sq. ft. of bare ground that provides sunning area important for warming pollinator bodies in preparation for flight. These areas may also serve as habitat for ground-nesting wild bees.
Plants with hollow pithy stems	Pollinators may use cavities as nesting habitat (e.g. sumac, box elder, elderberry).
Larval host plants (<i>e.g., milkweed</i>)	A specific plant species upon which butterfly larvae subsist, which is dependent on butterfly type. For example, Milkweeds, a latex-secreting flowering plant in the genus <i>Asclepias</i> , and honeyvine (<i>Cynanchum leave</i>) are the only host plants on which Monarch caterpillars can grow. Some other larval host plants include Queen Anne’s lace, clovers, thistles and violets.

Questions

Questions regarding the Habitat Assessment Protocol? Contact ROWHWG@uic.edu.



Pollinator Management Module Protocol

Rationale

Managing for habitat involves actions directed towards either:

- a) Minimizing threats that may impact the condition (or availability of) habitat, and/or
- b) Enhancing opportunities to improve habitat elements that can benefit a species.

Threats can degrade habitat quality or result in loss of habitat altogether. Managing against threats helps sustain habitat conditions in their current state. In addition to threats, enhancement opportunities help maximize specific qualities of habitats. These opportunities may typically include, but are not limited to adding nesting cover, adding specific host plants, enhancing niche requirements, or other needs. These often occur across a range of intensity or scale at any given site (Figure 2).

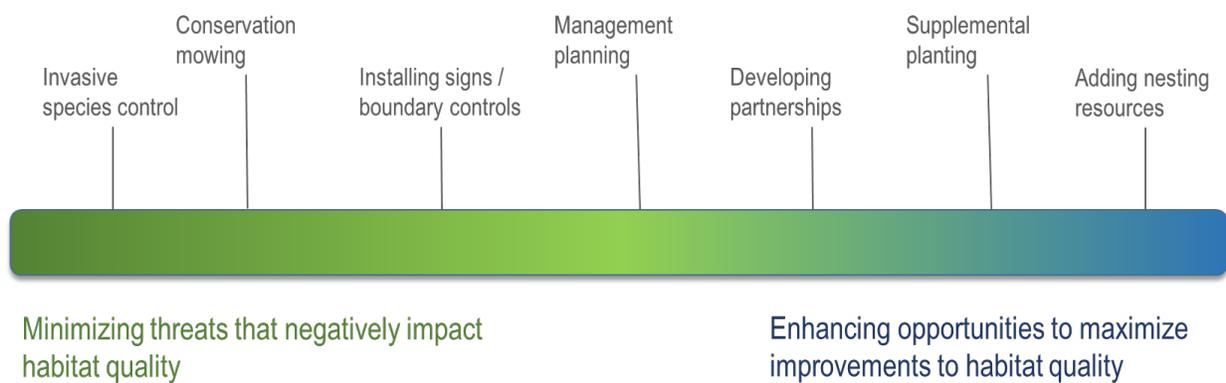


Figure 2. Habitat Management Threats-Opportunities Spectrum

The Management Module is an assessment tool used to identify threats and opportunities present at a site or management area, document the management actions taken to minimize threats and maximize opportunities, and evaluate the broad efficacy of those management actions. While the Management Module cannot account for all factors influencing the success of a particular management action, it does assess the general effectiveness of the action taken based on factors generally within the control of the manager (i.e., the scale and persistence of the actions taken). Actions taken that address the full threat or opportunity within the entirety of a site or management area are more effective than those that only partially address the threat/opportunity or a portion of the area. Similarly, actions that will have a lasting improvement on the site or management area (i.e. years versus months), are considered to be more effective. Therefore, management actions that address threats or opportunities thoroughly across the site or management area, and with a long-term response, are considered more effective than actions that only affect a smaller proportion of the area in need, or that have a marginal or short-term response (Figure 3).

Definitions

Scale – The percentage of the site managed to address a particular threat or opportunity during a single treatment, or action.

Persistence – The length of time that the management action is anticipated to have a lasting effect on the threat or opportunity.

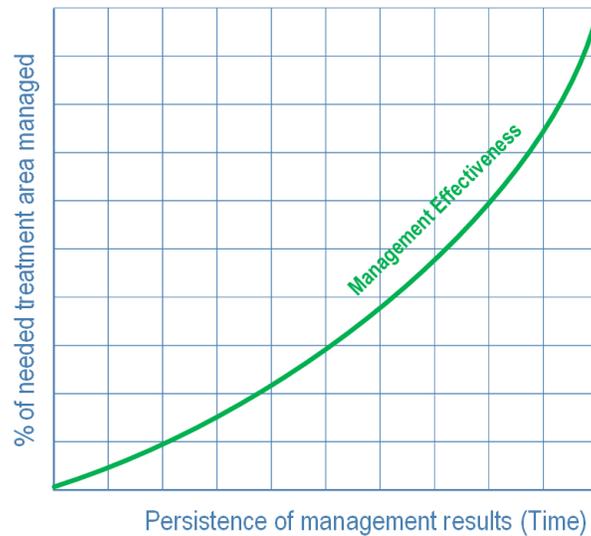


Figure 3. Conceptual Relationship between Habitat Management and Effectiveness

The Management Module’s purpose is to accompany a site or management area where habitat condition has been assessed using the Pollinator Habitat Assessment Protocol. It is separate from the Pollinator Habitat Assessment because management is often location-specific and dependent on habitat quality. Further, the scale of management may encompass a site or management area represented by several plots. The Management Module and Pollinator Habitat Assessment generate separate scores to better understand how management and habitat quality affect each other. The separate scores can be used to shape current and future decisions about the site or management area, and evaluate how well a site’s management is addressing the needs of the habitat.

Who Completes the Management Module?

The Management Module must be completed by a knowledgeable individual who has:

- Familiarity with the site or management area being evaluated,
- Information available to make reasonable judgements regarding site conditions and management actions, and
- A working knowledge of habitat management actions typically conducted by their organization.

How Many Management Module Evaluations Do I Complete for a Site?

The Management Module should be used to evaluate how well-aligned management efforts are with the habitat threats and opportunities present at a particular site or management area. In situations where management occurs similarly across a site or management area, one Management Module should be used to evaluate those actions. As a result, several Scorecard plots may be tied to a single Management Module evaluation. If a site or management area utilizes different management approaches (i.e., typically if the site or management area is very large, complex, or segmented into sub-units), then more than one Management Module may be completed as appropriate.

Management Module Instructions

M-1. Set-up Site Assessment

- M-1.1 **Compile and review information about the site or management area.** This can include photos, the relevant Scorecard plot datasheet(s), and other relevant site assessments.
- M-1.2 **Identifying Information.** Using information gathered onsite, or from knowledge of the Pollinator Scorecard plot location, complete the identifying information at the top of the module scoring sheet (i.e. Assessor, Date, Site ID, and so on).

M-2. Threats Managed

- M-2.1 **Determine whether “manageable” threats are present at the site or management area.** If none are present, select “No” in response to the “Threats Present?” in the dark green top row of the Threats Managed Table.

M-2.1.1 If “No” is selected, then do not complete any other portions of the threats managed section. A site or management area without additional threats receives full points available for this portion of the module.

M-2.1.2 Since most sites or management areas contain at least one threat, the table defaults to “Yes”. If “Yes” is appropriate for this site or management area, proceed with completing Part 1. Threats Managed according to the following instructions.

- M-2.2 **Select which “manageable” threats are present at the site or management area.** Commonly encountered manageable threats are listed in the first column. These can be changed according to user preference; however, the accompanying drop-down lists may not correspond to the newly added threat(s).

In the second column, select “Yes” from the drop-down menu if the threat is present on the site or management area being evaluated, or “No” if the threat is not present.

- M-2.3 **For manageable threats present, determine which threats were managed over the past calendar year.**

M-2.3.1 In the third column (labeled “Recommended Actions”), select the most applicable management action from the

What is a “manageable” threat or opportunity?

A threat or opportunity would be considered “manageable” if it meets the following criteria:

- An effective treatment is feasible and site conditions allow for the treatment opportunity (i.e. “We can do something here to improve...”)
- The treatment is appropriate and targeted (i.e. the action will directly remediate the threat, or improve this habitat element.)
- No other constraints prevent the activity from being considered (i.e. the action is not constrained by regulatory constraints, land ownership, or easement restrictions)

drop-down menu, or select “Other” if a management action is not listed in the drop-down menu and describe the action in the “Notes” column.

M-2.3.2 In the fourth column (labeled “Recommended Actions Taken Over the Past Year”), select “Yes” if the recommended management action has been conducted over the past calendar year, or “No” if the action has not been taken.

M-2.4 Scale of Treatment Impact. In the fifth column (labeled “Scale of Treatment Impact”), assign the degree of scale of the action taken within the area represented by the Pollinator Scorecard plot that calendar year. Some management actions may only address a portion of the threat where its located. Others may address it across the entire area under management consideration. Using the drop-down menu, select the option that best describes how much of the managed area represented by the plot is affected (or treated) by the action:

- Affects the entirety of managed area represented by plot (>90%)
- Affects the majority of area represented by plot (50-90%)
- Affects the minority of area represented by plot (<50%)

M-2.5 Persistence of Treatment Effects. In the sixth column (labeled “Persistence of Treatment Effects”), assign the degree of persistence for the action taken that calendar year. Some management actions may result in short-term effects or resolution before the threat returns. Other actions may have a long-term, or persistent, effect or resolution. Using your knowledge of the managed area and management action(s) conducted, select the option from the drop-down menu that best describes the amount of time for which the management action will be effective for:

- Action results in long-term improvements (≥ 4 years)
- Action results in limited, short-term improvements (1-3 years)
- Action results in seasonal improvements (<1 year)
- Marginal improvements or status quo maintained

M-2.6 Quantitative Effectiveness. The Management Module automatically assigns qualitative and quantitative effectiveness scores.

M-2.7 Repeat for other threats and actions completed.

M-2.8 Threats Managed Score. At the bottom of the Threats Managed Table, the “Percent of Threats Managed” and the resulting “Threats Managed Score” are summarized. The score is calculated by taking the sum of threats present compared to the threats managed, and multiplied by their effectiveness. The resulting percentage is then applied to the total points possible for this section, which yields the “Threats Managed Score”.

M-3 Opportunities Implemented

M-3.1 Determine Available Opportunities: Determine whether “available” opportunities are present at the site or management area. If none are present, select “No” in response to



the “Opportunities Present?” in the dark green top row of the Opportunities Managed Table.

M-3.1.1 If “No” is selected, then do not complete any other portions of the opportunities managed section. A site or management area without additional opportunities receives full points available for this portion of the module.

M-3.1.2 Since most sites or management areas contain at least one enhancement opportunity, the table defaults to “Yes”. If “Yes” is appropriate for this site or management area, proceed with completing Part 2. Opportunities Managed according to the following instructions.

M-3.2 Select Available Opportunities: Select which “available” opportunities are present at the site or management area. Commonly encountered opportunities are listed in the first column (labeled “Enhancement Opportunity”). An opportunity is considered “available” if it meets the same criteria as for actions taken to address threats, feasibility, appropriateness, and not prevented by constraints. In the second column, select “Yes” from the drop-down if the opportunity is available on site or “No” if the opportunity is not present.

M-3.3 For available opportunities present, determine which of those were managed over the past calendar year.

M-3.3.1 In the third column (labeled “Recommended Actions”), select the most applicable management action from the drop-down menu, or select “Other” if a management action is not listed in the drop-down menu and describe the action in the “Notes” column.

M-3.3.2 In the fourth column (labeled “Recommended Actions Taken Over the Past Year”), select “Yes” if the recommended management action has been conducted over the past calendar year, or “No” if the action has not been taken.

M-3.4 Degree of Scale: In the fifth column (labeled “Scale of Treatment Impact”), assign the degree of scale of the action taken within the area represented by the Pollinator Scorecard plot that calendar year. Some management actions may only address a portion of the available opportunity where its located. Others may address it across the entire area under management consideration. Using the drop-down menu, select the option that best describes how much of the managed area represented by the plot is affected (or treated) by the action:

- Affects the entirety of managed area represented by plot (>90%)
- Affects the majority of area represented by plot (50-90%)
- Affects the minority of area represented by plot (<50%)

M-3.5 Degree of Persistence: In the sixth column (labeled “Persistence of Treatment Effects”), assign the degree of persistence for the action taken that calendar year. Some management actions may result in short-term effects or benefits. Other actions may have a long-term, or persistent, effect or benefit. Using your knowledge of the managed

area and management action(s) conducted, select the option from the drop-down menu that best describes the amount of time for which the management action will be effective:

- Action results in long-term improvements (≥ 4 years)
- Action results in limited, short-term improvements (1-3 years)
- Action results in seasonal improvements (< 1 year)
- Marginal improvements or status quo maintained

M-3.6 **The Management Module automatically assigns qualitative and quantitative effectiveness scores.**

M-3.7 **Repeat for other opportunities and actions completed.**

M-3.8 **Opportunities Managed Score:** At the bottom of the Enhancement Opportunities Table, the “Percent Managed” and “Opportunities Managed” score is summarized. The score is calculated by taking the sum of available opportunities present compared to the opportunities managed and multiplied by their effectiveness. The resulting percentage is then applied to the total points possible for this section, which yields the “Opportunities Managed Score”.

M-4 Overall Management

M-4.1 After completing both parts of the Management Module, an overall management score is summarized at bottom of the module. This score is a combination of the threats managed and opportunities managed.

M-4.6 Repeat this process for other sites or management areas, as necessary.

Description of Scoring

The threats and opportunities are scored in the same way. Within each chart, effectiveness scores for each individual threat and opportunity are generated from a matrix of “Scale of Treatment Impact” and “Persistence of Treatment Effects”. The “Effectiveness of Action” column generates a *qualitative* score that describes to what extent the threat/opportunity has been addressed based on the user-selected scale and persistence. See the matrix below (Table 7).

Table 7. Description of Scoring

Scale (Rows) / Persistence (Columns)	Results in long-term improvements (≥ 4 years)	Results in limited, short-term improvements (1-3 years)	Results in seasonal improvements (< 1 year)	Marginal improvements or status quo maintained
Affects the entirety of the managed area ($> 90\%$)	Completely addresses	Mostly addresses	Partially addresses	Minimally addresses

Affects the majority of the managed area (50-90%)	Mostly addresses	Partially addresses	Minimally addresses	Maintains status quo
Affects the minority of the managed area (<50%)	Partially addresses	Minimally addresses	Maintains status quo	None

In the next column, a corresponding *quantitative* score is generated on a 0-5 scale. Each number corresponds to a qualitative rating from the “Effectiveness of Action” column. See the Table 8 below.

Table 8. Effectiveness of Actions

Effectiveness of Action	Score
Completely addresses	5
Mostly addresses	4
Partially addresses	3
Minimally addresses	2
Maintains status quo	1
None	0

The total threats/opportunities managed score is listed at the bottom of each chart. The maximum possible score for threats managed is 35 points. There are seven possible threats that can earn up to five points each if they are completely addressed ($7 \times 5 = 35$).

The maximum possible score for opportunities managed is 25 points. There are five possible opportunities that can earn up to five points each if they are completely address ($5 \times 5 = 25$).

At the bottom of the Management Module, the total Management Score and Management Rating are generated. The maximum possible Management Score is 60 points (25 points from opportunities + 35 points from threats = 60 total possible points). The quantitative score corresponds to the qualitative Management Rating. See the sections titled, *What Information Does the Pollinator Scorecard Provide?* and *Continuing the Journey*, for more information on how to apply these scores to future management.

Questions

Questions regarding the Management Module? Contact ROWHWG@uic.edu.



Continuing the Journey

Congratulations on completing the Pollinator Scorecard! The habitat you provide supports the life cycle needs of pollinators and can help contribute to the efforts to create strong pollinator populations nationwide. The following steps highlighted below can help you continue the journey of supporting sustainable pollinator populations, drive momentum, and help you tell your story of success.

Practice Adaptive Management

The monitoring data collected via the Pollinator Scorecard will be instrumental in identifying potential issues with the habitat and guiding continuous improvements that will increase the value of the pollinator habitat to wildlife. Questions that can be helpful to answer when evaluating the results of the scorecard and other monitoring data are below:

- Is plant diversity being maintained or increasing?
- Is there a need to add plants (e.g., interseeding)?
- Are there blooms throughout the season?
- Are there non-compatible or invasive species that are impeding habitat goals onsite?
- Are management actions improving habitat conditions?

As you undertake management of pollinator habitat, the Rights-of-Way as Habitat Working Group encourages you to take your pollinator management to the next level. There are several other ways to engage partners, gain knowledge through monitoring and consulting current [best management practices](#), share your success stories, and improve acknowledgement of your organization's efforts.

Participate in Citizen Science

To enhance the impact of monitoring efforts, consider contributing monitoring data to one or more citizen science projects. Each project may have a specialized monitoring protocol or may accept the data you collected for the Pollinator Scorecard as-is. The following citizen science programs are excellent ways to increase your impact and further scientific research on pollinators:

- The [Integrated Monarch Monitoring Program](#) is a national initiative to monitor monarchs *and* their habitats in a variety of land-use types, including ROWs, to inform conservation. Milkweed density, nectar plant diversity, and monarch use data are collected by monitors from public and private resource agencies, biologists, and citizen scientists, and are compiled in a national dataset to learn about the monarch population and causes for its decline.
- The [Western Monarch Milkweed Mapper](#) uses volunteer uploaded photos of milkweed and monarch sightings to build a dataset in the western range of the monarch. Data will improve our understanding of the distribution and phenology of monarchs and milkweeds, identify important breeding areas, and help to better understand monarch conservation needs.
- Consider contributing to one of several large programs run by volunteer submissions of photos of insects, plants, and animals, such as [iNaturalist](#) and the [National Phenology Network](#).
- [Monarch Tagging](#): This program is run by Monarch Watch and gathers data on monarch butterfly population size and migration.
- [NABA Count Circles](#): Join or start an official butterfly count sponsored by the [North American Butterfly Association](#) (NABA). NABA counts happen every mid-summer, and teams commit to count within the same 15-mile diameter circle over time. Joining a count allows for interactions



with other conservationists, while letting these concerned community members know about the current conservation program.

- [Project BudBurst](#): This project is sponsored by the National Science Foundation and collects information on the timing of leafing, blooming, and fruiting phases of plants throughout the year. The data collected is used by scientists and educators to learn more about how plant species respond to changes in climate locally, regionally and nationally.
- The University of Illinois' [Bee Spotter citizen science program](#) collects data on bumble bee and European honeybee observations in Illinois.
- [Right-of-Way as Habitat Geospatial Database](#): This database aims to collect data on pollinator habitat managed on ROWs and other energy and transportation lands. The database provides a central repository for reporting managed habitat, provides benchmarks for habitat restoration activities, highlights the ecosystem benefits that ROWs provide, and promotes new conservation partnerships and collaborations.

Apply for Certifications

Wildlife Habitat Council Conservation Certification®

[WHC Conservation Certification](#) sets the standard for corporate conservation actions, and produces quantitative benefits to corporations, communities and the environment. As the only voluntary sustainability standard designed to recognize corporate biodiversity efforts, Conservation Certification provides scorecard users with the opportunity to continue and expand their conservation actions while meeting their biodiversity, community and employee engagement and reporting goals.

Conservation Certification allows users to apply under any one of the [25 conservation themes](#), which are part of 4 conservation categories—Habitat, Species Management, Education & Awareness and Other Options. The program, which can consist of multiple projects, must meet [5 requirements](#) in order to qualify for certification.

Projects related to pollinators can be submitted under the Pollinators theme in the Species Management category (as long as monarch butterflies and other pollinators are being monitored). If the project is designed to address a threat to monarchs, it can be submitted as a Species of Concern project as well. Since all projects must be associated with a habitat, both project themes can be linked to Integrated Vegetation Management (IVM), Grasslands, and Landscaping habitats. Scorecard users are encouraged to consult [Project Guidances](#) or contact [WHC Strategy and Planning team](#) for guidance when applying for Conservation Certification.

Right-of-Way Stewardship Council Accreditation

The [Right-of-Way Stewardship Council \(ROWSC\)](#) is an accreditation program that establishes standards for responsible right-of-way vegetation management along corridors. The program promotes the application of Integrated Vegetation Management (IVM) and best management practices to utility vegetation managers in order to maintain power system reliability and address ecological concerns.

The [accreditation program](#) has four phases to insure those in the program can demonstrate their commitment to IVM. The amount of time required for this process varies greatly dependent on size of the utility involved; size is dominantly dictated by miles of ROWs managed. In general, a prospective utility should anticipate at least 90 days for the full process and 6 months for large utilities.



- Inquiry: The prospective utility completes a preliminary application (see resources [Accreditation Application Form](#) and [Auditing Process Detail](#)) and pays the application fee. The utility then participates in a conference call with the program administrator and audit committee chair to discuss process and to estimate costs. Prospective utility is now referred to as “Applicant.”
- Statement of Work: A lead auditor is assigned and a statement of work (estimate of time, schedule, and cost) is developed after the gap analysis. Applicant participates in a conference call with lead auditor to do a gap analysis of Applicant’s readiness and qualification for a full assessment. Applicant provides lead auditor with any pre-audit documentation requested (see resource [Document Submittal Form](#)). Based on statement of work the Applicant determines go/no-go or deferral of full assessment.
- On-site Assessment: The lead auditor forms an auditing team and coordinates with the Applicant to minimize time and cost while ensuring a comprehensive and objective evaluation of the Applicant’s conformance with Right-of-Way Stewardship Council Accreditation Standards. The auditing team(s) will inspect both random and representative sites as well as Applicant documentation, equipment and interview staff. Applicant may provide on-site travel to reduce expense of the audit process.
- Report Development: The final report process has three phases: initial draft development by the auditing team, sharing and review by Administrator and Applicant with feedback, and Final Report and recommendations completed by the Lead Auditor. The auditing team’s recommendations go to the full Right-of-Way Stewardship Council for final accreditation. The Council does not rule on the substance of the report but rather on the sufficiency of the process by the auditing team.

Monarch Waystation

A [Monarch Waystation](#) is a site that provides all of monarchs’ habitat needs: milkweed plants for caterpillars, nectar sources for adult butterflies and shelter for the butterflies as they migrate through North America.

If the pollinator habitat includes all of these habitat needs, it could certify the site as a Monarch Waystation through [Monarch Watch](#). Once requirements are met, an application would need to be completed, which includes a nominal processing fee.

Following the application process, the team will receive a certificate displaying the organization’s name and a unique Monarch Waystation identification number. Small, 9-inch by 12-inch weatherproof signs are also available for purchase and display from the Monarch Watch website. Once the site has been registered as a Monarch Waystation, the team may submit photographs of the site’s unique habitat to be included in the online registry.

Monarch Candidate Conservation Agreement with Assurances

The University of Illinois-Chicago administers the nationwide [Monarch CCA](#) for energy and transportation lands, which encourages non-federal landowners and land managers in the energy and transportation sectors to adopt measures to create net conservation benefits for the monarch butterfly. The agreement is unprecedented in terms of its cross-sector participation and geographic extent. The agreement spans the entire contiguous 48 states and is expected to eventually encompass millions of acres of habitat.



Organizations that participate in the Monarch CCAA commit to conservation measures such as reduced mowing, targeted herbicide treatments, or revegetation with native plants. In exchange for these commitments, the U.S. Fish and Wildlife Service gives assurances that no additional regulatory requirements will be required beyond the terms in the agreement if the monarch butterfly is listed under the Endangered Species Act. The Monarch CCAA may help companies and agencies avoid costly delays and last-minute disruptions to construction and maintenance activities associated with species listing requirements.

The Monarch CCAA requires that participating organizations conduct annual biological effectiveness monitoring to evaluate whether suitable habitat exists in areas where conservation measures have been applied. The Pollinator Scorecard provides a useful tool to help organizations meet the monitoring requirements of the Monarch CCAA, inform adaptive management, and gather supplemental monitoring data to support conservation science and shape ongoing vegetation management decisions.

Share your Success

It is important to celebrate even the smallest win for pollinators and biodiversity. Every act of conservation matters. Share your successes and lessons learned with others to generate more and continuous interest in the pollinator conservation movement. Consider what you want your success story to be and share it internally, with community members, and with other stakeholders.

