

Monarch CCAA Implementation Plan

For the Nationwide Monarch Butterfly Candidate Conservation Agreement for Energy and Transportation Lands

I. Roles and Responsibilities

List primary individuals responsible for implementing the CCAA in your organization:

Partner Organization Name: Energy Company or Transportation Agency

<p>CCAA Implementation Coordinator: Address: Phone Number: E-mail:</p>	<p>Jane Doe 123 Corporate Drive, Sunnyville, VA 12345 (555) 555-5555 jane.doe@organization.com</p>
<p>Vegetation Management Contact: Address: Phone Number: E-mail:</p>	<p>Jane Doe 123 Corporate Drive, Sunnyville, VA 12345 (555) 555-5555 jane.doe@organization.com</p>
<p>Environmental Department Contact: Address: Phone Number: E-mail:</p>	<p>Jane Doe 123 Corporate Drive, Sunnyville, VA 12345 (555) 555-5555 jane.doe@organization.com</p>
<p>Construction Management Contact: Address: Phone Number: E-mail:</p>	<p>Jane Doe 123 Corporate Drive, Sunnyville, VA 12345 (555) 555-5555 jane.doe@organization.com</p>
<p>Communications Contact: Address: Phone Number: E-mail:</p>	<p>Jane Doe 123 Corporate Drive, Sunnyville, VA 12345 (555) 555-5555 jane.doe@organization.com</p>

II. Implementation Details

Summary of Important Dates:

The following dates are described as key dates within this implementation plan:

Action	Responsibility	Annual Due Date
Annual report (internal review draft) will be prepared	CCAA implementation coordinator	January 15
Annual report (internal review draft) review completed	CCAA team contacts	January 22
Annual report submittal to UIC	CCAA implementation coordinator	January 31
Coordinate annual monitoring requirements with staff teams	CCAA implementation coordinator	March 31
Conduct field sampling for monitoring	Monitoring personnel	July - August
Compile field monitoring data	CCAA implementation coordinator	September 30
All tracking of conservation measures must be submitted to the CCAA implementation coordinator	CCAA team contacts	December 15

Conservation Measures Timing and Prescriptions:

Our Organization envisions achieving adopted acres targets through a combination of targeted herbicide use, native seed applications, and idle land set-asides. All conservation measures will be implemented in accordance with all company policies, procedures, and specifications.

Our team will use the [Monarch CCAA Toolkit](#) as a reference for the most up to date forms and implementation guidance, as well as training resources for new personnel assisting in CCAA implementation.

Targeted herbicide use

What: Targeted herbicide treatments may consist of targeted foliar treatments, cut-stump treatments, and basal treatments. All herbicides will be applied according to the manufacturer’s label and accompanying rates and methods.

Who: Targeted herbicide use will be conducted by licensed and trained pesticide applicators.

When: General treatment timing varies by application:

Foliar = May 1 through September 30

Cut stump = Year-round

Basal = Year-round

How: Targeted herbicide will be applied by individual applicators using hand-directed equipment to apply herbicides to targeted vegetation in a manner that minimizes application to off-target vegetation. Acres of targeted herbicide treatments identified in work plans will be used to track adopted acres for annual reporting.

Native seed mixes

What: Native seed mixes will be applied as part of final restoration to areas of ground disturbance exposed by construction and maintenance activities.

Who: Seed mixes will be ordered by project contractors and supplied by approved native seed vendors and consist of species native to the ecoregion and state where the planting occurs.

When: Mixes may be applied year round provided suitable site conditions are available. Although ideal seeding times are generally considered to be April/May and October/November.

How: All seed mixes will be installed by a qualified contractor with experience in native seed mix establishment in accordance with all applicable laws, regulations, and industry guidance. Seed mix tags, seeding plans, or other documentation will be saved to the project file for tracking and future reference.

Idle land set-asides

What: Idle lands will consist of locations previously maintained on the vegetation maintenance treatment cycle.

Who: The CCAA implementation coordinator will work closely with the vegetation management program and construction management program to quantify the acres that meet the requirements of idle lands described in the CCAA.

When: Verifying presence of idle lands will occur throughout the year. The CCAA implementation coordinator will work with teams to quantify adopted acres in idle lands at the start and end of each calendar year.

How: The vegetation management program will provide the CCAA implementation coordinator a summary of lines previously treated, but not in the planned maintenance cycle this year. The CCAA implementation coordinator will then coordinate with construction management to determine which adopted acres contained construction activities over the calendar year being reported. Areas (or segments of areas) that contained construction over that year will be removed from idle lands summarized. The remaining acres will be reported as idle land set-asides.

Monitoring Procedures:

What: We are responsible for monitoring at least 30 monitoring plot locations in accordance with the protocol defined in Section 14.2 of the CCAA. Monitoring data will be recorded by Energy Company staff using Survey123 and Collector. If mobile connections are not available, then the tracking spreadsheet will be completed and provided to the CCAA implementation coordinator. Random selection of sample plot locations are described in the accompanying CCAA Monitoring Plan.

Who: Field monitoring will be conducted by work auditors, work planners, and environmental department staff trained in CCAA monitoring protocols as part of other work occurring in the area. The CCAA implementation coordinator will coordinate annual monitoring requirements with staff by March

31, annually. Staff will notify the CCAA implementation coordinator of potential monitoring sites located on upcoming projects or tasks.

When: Monitoring will occur July through August for conducting monitoring, to the extent practicable. Variances outside of this timeframe must be discussed first with the CCAA implementation coordinator. Monitoring data will be compiled by the CCAA implementation coordinator by September 30, annually.

How: All aspects of implementation will be implemented in accordance with all Organization policies, procedures, and specifications. The accompanying CCAA Monitoring Plan describes our required operating procedures and quality control methods required for all aspects of monitoring.

Tracking and Reporting:

Tracking

What: Tracking adopted acres contributions will be completed throughout the year as projects and maintenance locations are finalized in accordance with the tracking methods described for each measure noted under Conservation Measures above.

Who: The project manager will report adopted acres to the CCAA implementation coordinator, and include location, date completed, potential for CCAA Partner overlap, and information sources used to support the estimate.

When: Idle lands will be summarized at the end of the calendar year as previously described.

How: Tracking data will be entered in the master tracking spreadsheet maintained by the CCAA implementation coordinator throughout the year as conservation measures are completed.

Overlap Accounting

What: Teams involved in tracking will assist the CCAA implementation coordinator in determining the estimated amount of overlap with other CCAA partner organizations occurring on adopted acres.

Who: Implementation contacts will provide estimates or documentation of overlap occurring on adopted acres.

When: During conservation measures tracking.

How: Areas of known overlap (e.g. a highway overlapping with electric utility corridor) will be quantified via GIS or project mapping. If the area of overlap is not measurable, an estimate will be provided to the CCAA implementation coordinator.

Reporting

What: The annual report will summarize the Organization compliance with CCAA requirements associated with implementation, tracking, monitoring, and reporting.

Who: The report will be compiled and submitted by the CCAA implementation coordinator. Other contacts listed in this implementation plan will review the draft annual report prior to submittal.

When: The report will be drafted according to the following deadlines:

1. All tracking of conservation measures must be entered in by December 15, annually.
2. The internal review draft will be prepared no later than January 15, annually.

3. Internal review will be completed by no later than January 22, annually.
4. Final submittal of the report to UIC will be completed by no later than January 31, annually.

All dates are approximate and may vary from year to year as advised by the CCAA implementation coordinator.

Adopted Acres Target Ramp Up Period (only if applicable):

Based on Organization's Certification of Inclusion and accompanying application, the company is responsible for a minimum of 8,000 adopted acres annually. To achieve this target, the Organization will require 3 years to "ramp up" operations to achieve this target. In the interim, the CCAA implementation coordinator and supporting team members will train and coordinate CCAA-related expectations across departments. The interim period will also allow the company to transition and refine its tracking system relied upon for accurate recordkeeping.

In the interim "ramp up" period, we anticipate meeting the following intermediate adopted acres targets:

- Year 1 = 1,000 acres
- Year 2 = 4,000 acres
- Year 3 = 8,000 acres

Funding:

Funding for implementation of the CCAA is provided through several funding accounts:

Asset management budgets provide time and resources to conduct routine vegetation management, which includes conservation measures such as targeted herbicide treatments, brush removal, and idle land set-asides.

Capital projects support vegetation management activities being completed in conjunction with capital project related work. Capital projects also typically result in more ground disturbing activities, resulting in more application of native seed mixes.

Departmental funds contribute to the annual administrative fee payment due annually from the date of our company's original application approval (August 1, annually).

III. Quality Control Details

Applicable Quality Control Procedures:

All aspects of implementation will be implemented in accordance with all company policies, procedures, and specifications. The documents outline the required operating procedures and quality control methods required for all aspects of implementation, tracking, and reporting.

Revisions to this Implementation Plan:

May 2021: Revisions made included updating monitoring protocols and organization points of contact.

June 2020: This implementation plan was created on June 1, 2020.

Monarch CCAA Monitoring Plan EXAMPLE

This document provides a template monitoring plan for the Pollinator Scorecard. A monitoring plan is *not required*, however, some organizations may find a plan is helpful for many reasons: maintaining consistency from surveyor to surveyor (year to year), providing specifications needed for contracting, or to document organization-specific procedures for quality control purposes.

This template is provided as an example resource; we encourage you to build upon this example for your own purposes. Please refer to the Planning for Monitoring Guidance 2021 Edition for assistance completing this template.

Organization & Author Information

Organization Name *Highway agency or transportation company name*

Author *Jane Doe*

Date *MM/DD/YYYY*

Monitoring Goals

The purpose of monitoring is to demonstrate the biological effectiveness of conservation measures on adopted acres and contribute to program-level monitoring as described in the Monarch Butterfly CCAA section 14.2.1. Monitoring is also intended to detect changes in milkweed stem densities on adopted acres to inform adaptive management, if needed.

Monitoring goals should be clearly identified and communicated to all team members prior to conducting monitoring. The monitoring goals as outlined in the CCAA are to:

1. Conduct monitoring in accordance with monitoring requirements outlined in Section 14.2 of the CCAA,
2. Verify that adopted acres are providing monarch habitat (milkweed and/or nectar plants), and
3. Inform adaptive management, when required.

If there are additional monitoring goals for your organization, provide a description of the monitoring goals to share with team members.

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Management Overview

Provide a brief description of the management plan for areas to be monitored. This will help inform the monitoring objectives and management response sections of this plan.

Management actions on adopted acres are described in the Implementation Plan.

Management & Sampling Objectives

Provide one or more pairs of management and sampling objectives (insert rows in the table below to add more). Management objectives describe the desired state of the habitat; sampling objectives describe the level of precision required to detect progress towards or achievement of each management objective.

1	Management Objective	Maintain greater than 6 milkweed stems on managed lands from 2020 through 2050
	Sampling Objective	Obtain estimates of milkweed stem abundance with 90% confidence intervals no wider than +/-2 milkweed stems per plot

Sampling Design

A sampling design describes the who, what, when, where, and how of collecting monitoring data.

Use the table below to summarize the sampling design elements of this plan. Subsequent sections of this monitoring plan allow for further documentation of your organization’s approach to monitoring.

Sampling Design Element	Instructions	Description
Area of Interest	Describe the geographic extent of the area that will be characterized with monitoring data.	<i>Includes all 8,000 adopted acres, see maps and tracking data for locations.</i>
Data Collection Protocol	Describe any supplemental considerations in addition to the CCAA monitoring protocol and June 2021 addendum.	<i>None. Established protocols will be followed as outlined in the CCAA Section 14.2 and June 2021 addendum.</i>
Number of plots collected	Indicate the number of plots to be collected. See the Planning for Monitoring Guide for assistance.	<i>30 plots per year in accordance with CCAA monitoring requirements.</i>
Plot location strategy	Describe how plots will be located within the area of interest.	<i>Random using desktop GIS random plot generation on adopted acres.</i>
Data collection platform	Method(s) used by your organization to collect and compile sampling data. Could include ROWHWG pollinator habitat scorecards, internal GIS, or paper hard copies of forms.	<i>Data collectors may use either the Tier 1 Pollinator Scorecard data collection hardcopy form or the ROWHWG Geospatial Habitat Database Survey123 monitoring app.</i>

Sampling Design Element	Instructions	Description
Survey timing	Sampling can be conducted any time during the growing season, but is ideally carried out during peak bloom	<i>Annually mid-May to mid-September.</i>
Survey frequency	Describe how often areas will be resampled (or if using permanent plots how often to revisit plots).	<i>Plots will be relocated annually depending on the location of adopted acres. Some permanent plots may be maintained where used in conjunction with other established monitoring efforts.</i>
Random plot selection method(s)	If plots will be established while in the field, indicate how plots will be located to reduce bias.	<i>If unsafe plots are encountered, surveyors will proceed to another predetermined plot, or randomly selected compass bearing and distances if no predetermined plots are located nearby.</i>
Data Collectors	List or describe who will collect data.	<i>Vegetation management personnel will collect plot data while working in the area; if necessary additional data collectors may be hired.</i>
Data management and reporting	Describe how data will be managed and how results will be reported.	<i>Data will be uploaded weekly to the ROWHWG Geospatial Habitat Database. Data will be analyzed and reported to the VP of Vegetation Management annually in the fourth quarter of the calendar year</i>

Area of Interest

Describe the geographic extent of the area that will be characterized with monitoring data. *Attach a map as Appendix A (optional).*

All 8,000 adopted acres are included in the monitoring effort. See Appendix A for map of adopted acres.

Sampling Protocol

The survey protocol developed for the CCAA are described in Section 14.2.2 in the CCAA. An excerpt of this protocol is provided via the [Monarch CCAA Toolkit](#).

Describe any deviations in monitoring protocol (if different than that described in [User Guide](#) of the ROWHWG Pollinator Habitat Scorecard) and select which Tier(s) of Scorecard to use. The table below describes the different Scorecard Tiers. Indicate whether to use paper forms, the Survey123 App, or an alternative form of data collection.

The Tier 1 Scorecard will be used. The optional milkweed stems tally will be conducted for all plots. Tier 1 Scorecards can be downloaded [here](#).

1. *The Survey Manager will establish the annual monitoring plan at least one month prior to sampling.*
2. *The Survey Manager will communicate any updates to Data Manager and Survey Technicians prior to commencing survey planning for the year.*
3. *The Survey Manager will work with the Data Manager to determine the extent of adopted acres to generate predetermined GIS plot selections.*
4. *The Data Manager will upload and communicate the plot locations to the Survey Manager and Survey Technicians.*
5. *Survey Technicians will ensure that updated plot locations are available on mobile and GPS devices prior to commencing field sampling.*
6. *Protocols for sampling described in Section 14.2.2 in the CCAA will be followed.*
7. *All monitoring data should be collected and provided to the survey manager by no later than October 31st, annually.*
8. *Data will be uploaded to the ROWHWG Geospatial Habitat Database following final review by the Survey Manager.*

Plot Locations

Sampling plots are to be randomly or systematic-randomly selected within adopted acres prior the time of the survey. Partners must established a method for selecting sample plots. Describe the selection process used here. Provide a map if possible.

Plots will be randomly distributed throughout the adopted acres using random plot generation in GIS. See Appendix B for a list of plot coordinates.

Plots will be located in the field using the coordinates provided using a GPS with sub-meter accuracy. The 150 x 10-foot plot should be oriented perpendicular to the right-of-way and away from road if possible. Otherwise, the data collector should rotate the plot towards the flow of traffic until the plot will fit within the right-of-way. The coordinate provided will serve as the left side of the plot as the data collector faces the plot.

If a plot cannot be accessed or is unsafe, the data collector will record the plot number and the reason for skipping. The data collector will first determine if an oversample plot is available nearby or will become available during the day's monitoring effort. If so, the oversample plot will be used. If not, the data collector may use a random number generator to select a bearing and a distance (within 100 meters) to locate a new plot from the safest accessible location next to the inaccessible plot.

If a plot is unvegetated, in whole or in part, the data collector will proceed with data collection, recording a 0 where appropriate.

Timing & Frequency

Sampling can be conducted any time during the growing season but is ideally carried out during peak bloom, or when monarchs are present for CCAA Partners. Conduct monitoring when responses to vegetation management are most likely to be evident. Describe the timing expectations specific to your organization.

Sampling will occur during the active growing season for flowering nectar plants, approximately mid-May to mid-September. When revisiting plots in subsequent years, efforts will be made to assess the plot within +/- 2 weeks of the date the plot was first assessed.

Equipment

Identify required and/or optional equipment needed by the survey technicians to successfully and safely complete field surveys. Common equipment used may include:

Equipment	Required?	Use
PPE (personal protective equipment)	Yes	Bring high-visibility vest, hat, water, sunscreen, bug spray
GPS unit with backup paper map and printed list of coordinates including spatial projection used	Yes	Plot locations are uploaded to a GPS unit; paper maps can be used if GPS unit fails.
Clipboard/pens or tablet/smartphone	Yes	Data may be collected via paper form or monitoring app
ROWHWG Pollinator Scorecard	Yes	Tier 1 version; bring in case monitoring app fails
Survey123 App	Optional	Monitoring can be completed via the Rights-of-Way as Habitat Working Group Geospatial Database mobile app, if desired.
Effectiveness Monitoring Template	Yes	Data tracking spreadsheet with the reporting fields requested by the CCAA
Flagging, marker cones, or stakes	Optional	Mark transect boundaries
Camera	Optional	Photo document plot conditions
Sampling binder	Optional	Reference documentation such as safety forms, field protocol, and data sheets

Describe or list your organizations required and optional equipment used to conduct field data collection:

Equipment	Required?	Use

Monitoring Roles / Responsibilities

Provide the contact information for the organizational personnel assigned to the monitoring roles (see Planning for Monitoring Guidance for role responsibilities).

Survey Manager Name:

Address:

Phone Number:

E-mail:

Survey Technician Name:

Address:

Phone Number:

E-mail:

Data Manager Name:

Address:

Phone Number:

E-mail:

Describe any additional roles or responsibilities here:

1. Survey Manager

The survey manager is responsible for making sure field surveys are conducted according to the CCAA protocol (see Section 14.2.2 in the CCAA) and that the data is in a format suitable for inclusion in the annual CCAA report. Responsibilities include:

- Planning and Oversight
 - Proper planning and resources are allocated in a timely manner
 - Survey technicians have all equipment, tools, and trainings required
 - Adherence to all organizational health, safety, and communications protocols
- Quality Control
 - Minimum required number of sample plots are collected
 - CCAA protocols were followed, including proper data collection
 - Data collected is accurate for the plot(s) sampled

2. Survey Technician

Survey technician(s) will conduct field surveys and keep track of all data collection. Technician(s) will be responsible for:

- Field Sampling
- Quality Control

- Completing any training required by your organization to conduct sampling
- Adherence to all organizational health, safety, and communications protocols
- All CCAA field sampling protocols were followed accurately
- All data collected is stored in the proper format and location(s) required for annual reporting

3. Data Manager

The data manager is responsible for supporting the collection, storage, reporting, and archiving of all data that was collected in the field, and providing it to the survey manager in a format needed for annual reporting, or other analysis.

Training

Training is recommended for staff conducting field surveys to orient staff to the sampling protocols, ensure consistent field sampling, and teach milkweed and nectar plant identification. We recommend personnel engaged in CCAA monitoring be trained at least once annually, and periodically throughout the season, on:

1. Your organization's involvement in the Monarch CCAA, including the role of monitoring in maintaining compliance.
2. The identification of both native and non-native species, particularly invasive and noxious weeds and milkweed and nectar plant resources for pollinators.
3. Protocols and procedures expected of surveyors conducting field sampling. This may include any access communications, plus health and safety requirements.

Vegetation management staff will be trained annually and periodically throughout the season on the identification of both native and non-native species, particularly invasive and noxious weeds and milkweed and nectar plant resources for pollinators. A half-day training exercise for staff conducting assessments will be held each year to orient staff to the sampling protocols and teach milkweed and nectar plant identification.

Data Management

Partners should develop a data management strategy to ensure that data collected in the field is properly stored for later use and review. This *may include*:

1. Once surveys are completed, verify sample plots are uploaded into the appropriate geospatial database.
2. Scan any hard copy completed data sheets and provide copies to the data manager.

Describe the data management protocols expected of your organization.

Data may be collected in paper form using the Pollinator Habitat Scorecard data collection form or using the ROWHWG Geospatial Database monitoring app. Data collected on paper will be entered through the app within the week it is collected. Paper forms will be archived in by the Survey Manager and digital copies will be made.

Data Notification and Reporting

Describe the data reporting protocols expected of your organization.

1. Notify the survey manager or data manager after each sampling event is conducted. This may allow for optimal quality control verification.
2. After surveys are completed, the data will be provided to the data manager and survey manager. The data gathered will be used to inform monitoring goals and complete annual reporting.
3. Schedule annual CCAA team review of collected monitoring data, and identifying adaptive management considerations when needed.
4. *Plot data will be uploaded to the Rights-of-Way as Habitat Geospatial Database at the conclusion of each field season, no later than November 1.*
5. *The results of the data analysis will be reported to the VP of Vegetation Management annually in the fourth quarter of the calendar year. Any management response will be planned to begin the following season.*

Appendix A: Map of Area of Interest
(with plot locations, optional)