

## Frequently Asked Questions about Monitoring and Adaptive Management in the Monarch CCAA/CCA

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### Purpose

Adaptive management is incorporated within the CCAA/CCA (CCAA; Agreement) to ensure the expected net conservation benefit is provided, as described in the permit and supporting documents authorizing the Agreement. This frequently asked questions (FAQ) document addresses some of the common questions received regarding adaptive management within the Agreement. This guidance has been developed in cooperation with the U.S. Fish and Wildlife Service (USFWS, the Service).

### Key Takeaways

1. Adaptive management and effectiveness monitoring help ensure that the net conservation benefit envisioned by the CCAA is supported over the life of the permit.
2. Not achieving the milkweed or nectar plant targets in monitoring results does not result in non-compliance. The CCAA, or a Partner's Certificate of Inclusion, cannot be revoked simply because monitoring targets are not achieved.
3. Planting milkweed is not a required conservation measure, nor is it expected to be a requirement of adaptive management if monitoring targets are not achieved. See Section 6 of the Agreement for the suite of measures and options that can benefit monarch habitat.

### Q. Why did the Service choose to focus on milkweed as the only required metric for habitat monitoring on adopted areas in the Midwest and Northeast, instead of including nectar plants as a second option?

A. In its final biological opinion on the CCAA, the Service evaluated the potential milkweed contributions of Partners on adopted acres. There has been extensive research conducted on milkweed's role as the host plant for monarch butterflies, and the potential quantities of milkweed needed to have a positive influence on the eastern monarch butterfly population. This research, combined with the Service's targets for conservation in the monarch's core breeding habitat across the Midwest and Northeast U.S., make sustaining or increasing milkweed a primary conservation benefit of the CCAA.

This is not intended to discount the importance of nectar plants on monarchs. Having abundant nectar sources available to monarchs throughout the times at which they are present is critical to adult monarch survival. As the Service analyzed the CCAA's net conservation benefit, it could not find information to support a specific target or metric that would be broadly indicative of an increase in nectar from pre-Agreement conditions on Adopted Acres. The Service looked for metrics that would fit the agreed-upon monitoring scheme – estimating cover of nectar plants within 1,500 sq ft plots. There may be another way to measure increases in nectar caused by Partner activities on Adopted Acres and the Service would entertain ideas for doing so.

While not required, collecting data on nectar plant abundance is very important. Collecting such data can inform monarch conservation efforts, and could help the CCAA program develop a minimum threshold or adaptive management trigger related to nectar plants. Having data on nectar plants will help increase our understanding of nectar resources on the landscape, and their role in monarch conservation. This type of information can also demonstrate other benefits of adopted acres and inform future conversations regarding CCAA implementation and net benefit. While not required, the Service strongly encourages CCAA Partners to implement conservation measures that conserve or restore nectar plants, and collect information on nectar plants. As they gain more information, the Program Administrator and the Service welcome continued dialogue on establishing a nectar-related adaptive management trigger to provide additional flexibility to Partners.

**Q. Does the “milkweed only” monitoring target in the Midwest and Northeast effectively require Partners to plant milkweed?**

A. We described the rationale for the milkweed-only monitoring target in the response to the previous question. Again, monitoring targets are not compliance targets, but allow us to determine effectiveness towards net conservation benefit as described in the conference/biological opinion. The actions taken by Partners in the Agreement are intended to sustain or improve BOTH milkweed and nectar plants on adopted acres.

Planting milkweed and/or nectar plants is only one of several approved conservation measures that Partners can choose to adopt. The Agreement does not prescribe *which* conservation measures are implemented by Partners, rather that appropriate conservation measures are selected to address the key threats for monarchs on adopted acres. We recognize that Partners may not choose to intentionally plant or restore milkweed, especially on leased or easement lands where there may be limitations on the types of conservation measures that can be implemented.

The suite of approved conservation measures broadly promote the conservation and/or restoration of flowering plants, including but not limited to, milkweed and/or nectar plants. The conservation measures align with many established industry best practices that maintain the safe and reliable use of energy and transportation lands. These same practices, if properly implemented as conservation measures, will also minimize adverse impacts to monarch habitat needs and help sustain or improve habitat where it might otherwise be lost or converted. Actual vegetation resulting from conservation measures will largely depend on site conditions. However, in many cases, natural establishment and reproduction of milkweed and other nectar plants will occur on adopted acres without direct planting. We encourage Partners to communicate those benefits to landowners and partnering organizations, and to their internal organization’s audiences.

**Q. Does the monitoring focus on milkweed suggest that impacts to nectar sources will not be considered “take” (in the Midwest and Northeast) in the event that monarchs are listed under the Endangered Species Act at some point in the future?**

A. A decision whether or not to list monarchs as “threatened” or “endangered” under the Endangered Species Act (ESA) is a time consuming and rigorous decision-making process. We cannot reasonably predict all circumstances under which an activity may, or may not, result in incidental take. In the ESA, the term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Incidental take refers to takings that result from, but are not the purpose of, carrying out an otherwise lawful activity.

Research has documented the monarch butterfly’s use of multiple milkweed species as a host plant for egg laying and larval development. However, nectar plants are an important component for chrysalis formation and adult foraging. According to the [Monarch Joint Venture](#), monarchs can form their chrysalis, or pupa, on other vegetation up to 33 feet, or 10 meters, away from milkweeds used by monarch larvae. Adult butterflies regularly rely on nectar plants for forage during their migration.

If monarchs are determined to require listing, the Service will identify the conditions under which take is expected to occur based on their analysis of the best science available. Until then, for CCAA implementation and planning purposes, Partners should consider take of monarchs occurring for any activities that meet the definition of covered activities. To determine whether an activity meets that definition, use the checklist in Section 5 of the Agreement, which requires consideration for areas that contain both milkweed and nectar plants in light of the monarch’s various life stage requirements, as well as the time of year at which the activity is occurring.

**Q. If monitoring targets are not met, will Partners be penalized or removed from the CCAA? Will adaptive management triggers have the possibility to be amended?**

A. Monitoring for milkweed and nectar plants within the CCAA is considered to be *effectiveness* monitoring, not *compliance* monitoring. In other words, it is intended to verify and ensure the Agreement's effectiveness in delivering the expected net conservation benefit, rather than Partner compliance. Compliance will be verified through adopted acres tracking and annual reporting.

Partners not meeting the monitoring targets associated with milkweeds and nectar plants will not be penalized. Instead, if the thresholds described in Section 14.2 of the Agreement are not achieved, the individual Partner will be required to describe their self-evaluation of the monitoring results and describe ways in which the monitoring targets may be met in the future via adaptive management. Possible outcomes may include adjustments to their approaches for implementing conservation measures or conducting monitoring. We do not expect that adaptive management will include requirements to plant milkweed, but instead consider the full suite of conservation measures implemented by the Partner, and how they may be adapted to support, or at a minimum not harm, milkweed that may already be present.

If the CCAA program fails to achieve the overall monitoring outcome desired, then the adaptive management trigger in Section 10 of the Agreement will require review. Under that scenario, the Program Administrator, Partners, and the Service will review the cumulative monitoring results, evaluate where shortfalls occurred and why, and discuss appropriate adaptations. Similar to the Partner-level adaptive management response, possible outcomes may include adjustments to approaches for implementing conservation measures or conducting monitoring, either across all Partners, or selectively depending on the quality and extent of monitoring data evaluated. We do not expect that adaptive management will include requirements to plant milkweed.

The monitoring targets and adaptive management requirements are ultimately intended to ensure that the net conservation benefit envisioned by the CCAA can be sustained over the course of the 25 year permit. We understand that the science of monarch biology, and its conservation needs, is evolving. There is still much to learn and the CCAA monitoring can help improve science's understanding of those needs. As described in the Changed Circumstances discussion within the CCAA (Section 13), as well as in discussion of amendments to the CCAA and accompanying permit in Section 9, the USFWS and Program Administrator may amend the CCAA or permit to accommodate changed circumstances in accordance with all applicable legal requirements when the need arises. If emerging science or sufficient CCAA monitoring data provides information that suggests different monitoring targets are appropriate, the USFWS, Program Administrator, and Partners will evaluate and determine potential modifications or amendments to the CCAA as appropriate.

**Q. Would failure to achieve the net conservation benefit affect the assurances provided through the Enhancement of Survival permit?**

A. The assurances are based on the Partner implementation of the agreed-to conservation measures, monitoring, reporting, and other requirements in the CCAA and are not directly tied to whether the CCAA reaches the expected net conservation benefit. Moreover, the assurances are necessary only if the covered species is listed. While each CCAA is based on the best scientific information available and we expect implementation of the CCAA's conservation measures will result in the improvement of the species' populations or habitat, it is possible that the benefit may not be achieved. The adaptive management features in a CCAA can help to address these situations. In any event, the assurances provided to the Partner are not affected if the species or habitat does not achieve the expected response from the implemented conservation measures. (Taken from Service's response to Comment 17 (page 95168) of the Candidate Conservation Agreement with Assurances Policy, December 27, 2016 (81 Federal Register 95164)).

**Q. Could the permit be revoked if the expected benefits are not achieved despite compliance with the CCAA?**

A. The CCAA policy is clear regarding whether a permit associated with a CCAA could be revoked as a last resort when the permitted activity is determined to be likely to jeopardize the continued existence of a species covered by the permit. We will not revoke a permit simply because the conservation measures implemented through the CCAA fail to achieve the expected benefits to the species or its habitat despite the property owner's compliance with the provisions in the CCAA. (Taken from Service's response to Comment 25 (page 95169) of the Candidate Conservation Agreement with Assurances Policy, December 27, 2016 (81 Federal Register 95164)).