Nationwide Candidate Conservation Agreement for Monarch Butterfly on Energy and Transportation Lands

Conservation Mowing Implementation and Tracking

April 2023

Purpose

Partners track adopted acres that they maintain as monarch habitat through conservation measures identified in the CCAA. This guidance helps Partners with consistent tracking and implementation of the **mowing to enhance floral resources** conservation measure.

Background

Conservation measures like mowing to enhance floral resource habitat can be implemented on adopted acres when following the guidelines outlined in the Monarch CCAA and published BMPs for monarchs. Conservation mowing may be implemented differently depending on the location and context. This guidance document is intended to provide clarity on acceptable approaches for conservation mowing, and how they should be tracked towards CCAA compliance reporting.

Approach #1: Conservation Mowing According to the Mowing for Monarchs Guidelines

What it involves: The simplest way to implement mowing as a conservation measure on adopted acres is to schedule mowing activities during times of year where monarchs are not present.

How to do it: Partners can consult Mowing for Monarchs guidance published by Monarch Joint Venture to determine the appropriate dates for mowing on adopted acres that will avoid and minimize harm to monarchs.

Tracking: Track this approach as a conservation mowing activity in annual reporting. Summarize the acres mowed in accordance with the recommended timeframes in this, or similar, published monarch conservation guidance.

Rationale: By mowing at times when monarchs are not present, CCAA Partners can avoid and minimize harm to monarchs while clearing vegetation. However, mowing based on seasonal timing may not be an option for all Partners. There are other alternative mowing approaches that may be beneficial for organizations depending on characteristics of adopted acres or management objectives. Two alternative strategies include:

1) Rotational mowing, and
2) Targeted mowing

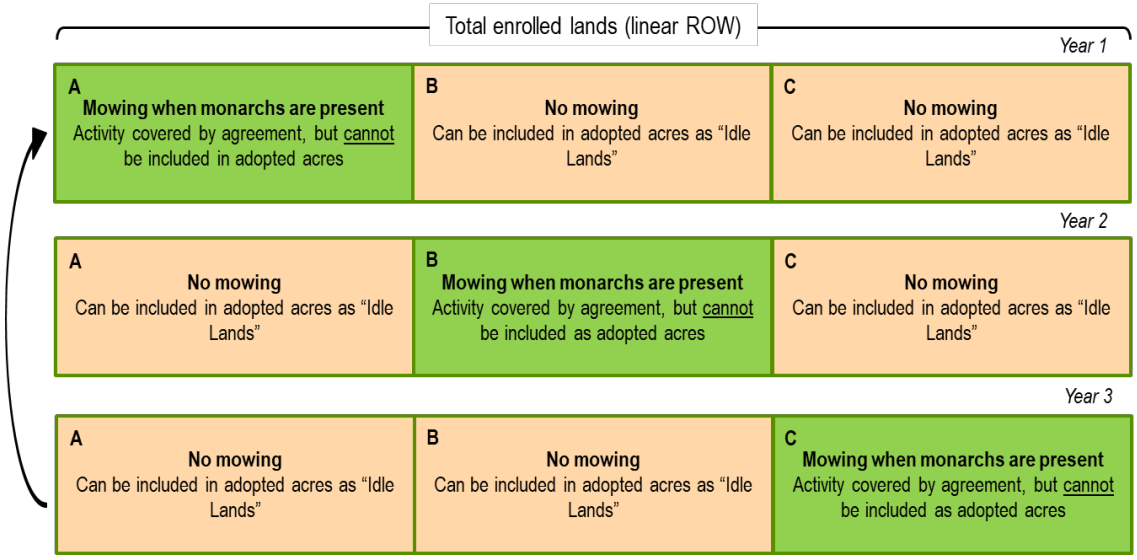
Approach #2: Rotational Mowing

What it involves: Rotational mowing involves cutting portions of lands on an annual basis. This practice mows a portion of lands while leaving other vegetation unmowed each year. Subsequent years may include mowing of other previously unmowed areas – often in a 2-to-5-year cycle. Rotational mowing may be beneficial for some Partners to implement due to its alignment with existing mowing policies, or to reduce communication or training barriers.

How to do it: A rotational system may provide benefits through expanding the window of potential mowing times and offering a simplified, and assured, manner for calculating adopted acres each year. Under this system, every year a different subset of total enrolled lands would be mowed once annually.

Tracking: Lands mowed when monarchs are present do not count towards a Partner's adopted acres. This mowing is considered as causing take and would be a covered activity under the enhancement of survival permit. However, for conservation measures, track the *un-mowed* portion of acres as the "suitable habitat set aside, or idle lands" conservation measure. An example of this is highlighted below.

Example



We recommend monitoring of rotational mowing adopted acres in the un-mowed years to document undisturbed milkweed and nectar plants. However, this may require additional planning and schedule coordination with vegetation maintenance personnel during annual monitoring preparations. Partners must also ensure that their random sampling methodology considers all potential adopted acres over the course of their CCAA monitoring plan.

Rationale: The implementation of a rotational mowing system, with mowing occurring outside designated windows specified by published BMPs, provides a method for implementing conservation measures on adopted acres across a large system of lands where mowing is a primary tool, where personnel or equipment availability is limited, or where certain types or timing of mowing is required by law or policy.

Approach #3: Targeted Mowing

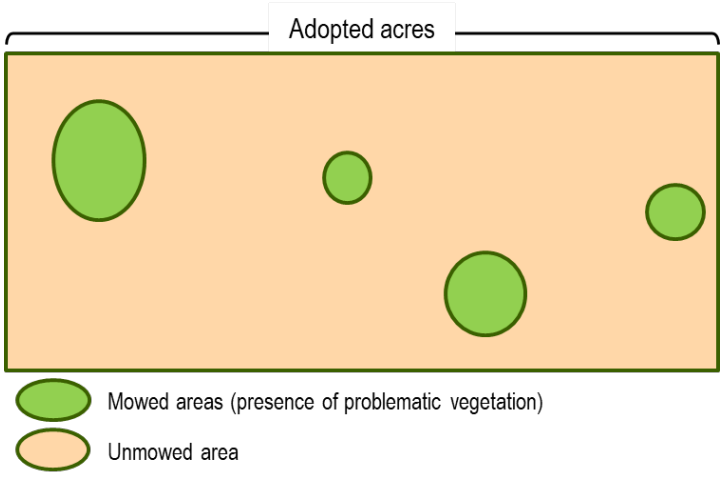
What it involves: Targeted mowing, or spot-mowing for seed mix establishment or invasive species control is another approach recommended in pollinator guidance like the Federal Highways Administration BMPs for Pollinators, Xerces Society's Managing Habitat for Pollinators, and other state or regional guidance. This approach may be useful for Partners when the first two approaches are not be compatible with other operational or regulatory requirements like establishing newly seeded or planted vegetation, controlling ecologically invasive species, or noxious weed law compliance.

How to do it: This approach uses mowing of targeted portions of a site where problematic or incompatible vegetation occurs (e.g., early-establishing woody plants, annual weeds associated with establishing newly seeded or planted vegetation, persistent ecologically invasive or noxious weeds) and avoiding mowing across other portions of the site. Managing undesirable vegetation with targeted mowing may require mowing multiple times a year outside of recommended monarch butterfly avoidance timing windows. During each targeted mowing event, the operator should ensure that either, 1) any native nectar or milkweed plants are avoided, and that 2) areas of problematic vegetation is targeted while the remainder of a site is avoided to preserve milkweed and nectar plants available on adopted acres. With the exception of minimal areas incidentally mowed in the course of targeting problematic or incompatible vegetation, mowing milkweeds or native nectar plants would be considered a covered activity, but not a conservation measure.

Tracking: Conservation measures like targeted conservation mowing should be calculated not only based on the area that was directly treated with mowing, but also the area that was surveyed during those treatments to determine whether the target areas treated were located throughout surrounding acreage. Conservation measure tracking should sum the total acres surveyed during treatments, not only treated areas.

An example of tracking acreage for targeted mowing is provided in the example below. If we assume the total mowed areas total two acres, but it required surveying the surrounding 15 acres to identify and target mowing locations, then the full 15 acres would be counted for conservation mowing – unless already quantified under another conservation measure (like other conservation mowing, targeted herbicide use, or idle land set asides).

Example



Rationale

The implementation of a targeted mowing system may be a useful strategy for Partners with adopted acres that require more intensive localized management through mowing or have issues with problematic vegetation on site. Even though targeted mowing may result in temporary loss of nectar plants (if target vegetation is a flowering invasive nectar plant), the long-term benefits of sustaining or creating more diverse vegetation is expected to create long-term habitat benefits for monarchs and other pollinators. This approach is consistent with guidance for tracking targeted herbicide use as a conservation measure and methods for early-detection and rapid-response in weed management.

Other Approaches

Conservation mowing can vary depending on site context and floral resources onsite. If an Applicant or Partner considering a conservation mowing strategy that does not align with one of these three approaches presented, contact the Monarch CCAA Program Administrator to discuss whether your mowing strategy aligns with the intent of the mowing to enhance floral resources conservation measure.