

Monarch CCAA Implementation Plan

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

Roles and Responsibilities

Partner Organization Name: Oklahoma Department of Transportation (ODOT)

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| <p>CCAA Implementation Coordinator: Address: Phone Number: E-mail:</p> | <p>Vonceil Harmon, ODOT Natural Resources Program Monarch Lead Biologist 111 E Chesapeake Street, Norman, Ok 73019 (405) 249-5139 vharmon@odot.org</p> |
| <p>Environmental Department Contact: Address: Phone Number: E-mail:</p> | <p>Amber McIntyre, ODOT Assistant Division Manager (interim) 200 N.E. 21st Street, Rm 2-A6, Oklahoma City, Ok, 73105 (405)210-3671 amcintyre@odot.org</p> |
| <p>Maintenance Management Contact: Address: Phone Number: E-mail:</p> | <p>Taylor Henderson, ODOT State Maintenance Engineer 200 N.E. 21st Street, Rm 2-A6, Oklahoma City, Ok, 73105 (405)521-2557 thenderson@odot.org</p> |
| <p>Construction Management Contact: Address: Phone Number: E-mail:</p> | <p>John Leonard, ODOT State Construction Engineer 200 N.E. 21st Street, Rm 2-A6, Oklahoma City, Ok, 73105 (405)522-4883 jleonard@odot.org</p> |
| <p>Media and Outreach Contact: Address: Phone Number: E-mail:</p> | <p>Kaitlyn Taylor, ODOT Natural Resources Program Biologist 111 E. Chesapeake Street, Norman, Ok 73019 (405)227-5915 ktaylor@odot.org</p> |

I. Implementation Details

Summary of Important Dates:

| Action | Responsibility | Annual Due Date |
|--|--------------------------------------|-----------------------|
| Annual Report Draft Preparation | ODOT CCAA Implementation Coordinator | December 15-January 2 |
| Annual Report Draft Available for Internal Review | ODOT CCAA Team Contacts | January 2 |
| Annual Report Submitted to UIC | ODOT CCAA Implementation Coordinator | January 31 |
| Annual Monitoring Plan Coordinated With Team Contacts | ODOT CCAA Implementation Coordinator | March 31 |
| Conduct Field Monitoring- Spring and Fall Migration Season | ODOT CCAA NRP Monitoring Team | April 15 –October 1 |
| Compile Field Monitoring Data | ODOT CCAA NRP Monitoring Team | November 15 |
| Conservation Measure Activity Tracking Confirmed | ODOT CCAA Implementation Coordinator | December 15 |

Conservation Measures Timing and Prescriptions:

ODOT has identified conservation measures to address key threats within the Department’s adopted acres. These include native seeding to restore or create suitable monarch habitat, brush removal, conservation mowing, targeted herbicide treatments, and managing suitable habitat set asides and idle lands using integrated vegetative best management practices for on the ground monarch benefit. All conservation measures will be implemented in accordance with the Department’s policies, procedures, and specifications.

ODOT will employ the Monarch CCAA Toolkit to provide current implementation guidance and documents to the Department, as well as training resources for the ODOT CCAA Team contact’s use.

Native Seed Mixes

- Native seed mixes will be developed internally with monarch and pollinator beneficial plant species and aimed to target a variety of geographical regions and topographical challenges within the Department’s adopted acres. These mixes will be used to enhance existing native vegetation areas, restore native vegetation areas, and create new native vegetation areas appropriate to Department’s rights-of-ways use. Additionally, native seed mixes will be developed to address ground disturbance at an on-request basis for erosion control and other ground disturbing activities.

- Native Seed mixes will be ordered by the ODOT Maintenance Districts or specific ODOT project contractors and supplied by pre-approved native seed vendors. These mixes will be comprised of species native to ecoregions of Oklahoma and surrounding states.
- The preferred time to apply native seed mixes in Oklahoma is in the Fall, September through November, or in Spring, April through May. Mixes may be used year-round, but only for special circumstances in suitable conditions.
- Unless installed by ODOT District Maintenance technicians all native seed mixes will be applied by a qualified contractor with experience in native seed applications and in accordance will all applicable laws, regulations, and safety specifications. Seed mix tags, seeding plans, and other documentation will be maintained by the ODOT Natural Resources Program with a copy furnished to the respective ODOT Maintenance District.

Brush Removal

- Removal of brush and trees along rights-of-ways not only provides for the safety of motorists, but the action can also create travel and roosting corridors for monarchs. Wherever possible brush and trees outside the clear/safety zones and in suitable monarch habitat areas will be assessed for selective thinning and removal of unhealthy and invasive woody vegetation.
- Mechanical operations will be conducted by ODOT Maintenance Technicians trained in proper trimming equipment operations or experienced contractors. Targeted herbicide applications will be performed by State certified pesticide applicators. All brush removal personnel will be familiar with tree and woody vegetation common to the Department's rights-of-ways.
- Mechanical trimming for larger stands of problematic trees and brushy shrubs will be used to open areas for the regeneration of monarch beneficial plants. Care will be taken to minimize wounding of surrounding forest areas. Selective mechanical trimming will be used to soften forest edges and maintain healthy native forb growth and an open canopy. Herbicide applications for brush, tree, and woody vegetative control will be used as basal and stump treatments following any mechanical removal. Additional targeted herbicide treatments will be used to control regrowth and resprouting of undesirable individual woody plants.
- Mechanical removal is best done in the fall and winter when monarch butterflies are off the landscape. Herbicide applications for basal and cut stump can be done year-round but should be applied as soon as possible after cutting and thinning. Suckers and regrowth will be spot treated during the active growing season. Brush and woody vegetative removal actions will be captured in the Department's District Residency records and submitted to the ODOT CCAA implementation coordinator for inclusion in the Monarch CCAA Annual Report.

Conservation Mowing

- Conservation mowing on the Department's adopted acres will be implemented to promote and enhance floral resources during migration and breeding in suitable monarch habitat areas. These conservation mowing areas will be clearly identified with Department vegetative management signs and equipment operators will be notified of these areas prior to any vegetative management activities.

- Mowing in the Department's Maintenance Districts will be performed by the respective District's personnel or qualified contractors familiar with all Department safety policies and operating procedures.
- Within the Department's adopted acres mowing of suitable monarch habitat, outside the roadside clear/safety zone, should occur no more than 3 times per year. Early season mowing may be executed prior to April 1st if needed. A second season mowing can occur between June 20th and August 10th if needed and a third mowing should not be done until after November 15th if needed. These dates are based on the current best available vegetative management data and may be modified as Department vegetative management research indicates.
- Ideally if clear/safety zone requirements are met conservation mowing areas can extend to the rights-of-ways fence line in suitable monarch habitat areas encompassing the toe of slope in fill areas and the back of ditch in cut areas. Bottoms and backslopes may not need to be mowed as frequently depending on the quality of habitat and the weed and invasive species load. A variety of mowing techniques can be incorporated in response to roadside topography. These include strip mowing, contour mowing, and rotational location mowing as needed to control invasive weeds and woody vegetation. Maintenance District Engineers will work with the ODOT CCAA team contacts to determine the best approach for their respective District rights of ways. Mowing activities will be captured in the Department's District Residency records and submitted to the ODOT CCAA implementation coordinator for inclusion in the Monarch CCAA Annual Report.

Targeted Herbicide Treatments

- To establish and maintain suitable monarch habitat outside the clear/safety zone targeted herbicide treatment of undesirable vegetation will be used as needed to suppress weedy plant species.
- All herbicide treatments will be applied by certified pesticide applicators in accordance with manufacturer's label of appropriate rates, methods, and seasonal timing.
- The Department's herbicide program allows for each Maintenance District to target treatments to meet management situations and needs of the District. Roadside scouting prior to herbicide application will be done by the Districts and will inform weed control work plans annually. Winter and summer windows of application will be used to ensure control is achieved before vegetation germinates, is able to mature and set seed, and during dormancy times.
- Targeted herbicide treatments will be applied on Department's adopted acres with consideration of enhancing suitable monarch habitat while considering safety of the traveling public. Applicators will use back-pack sprayers to deliver spot treatments and minimize overspray of desired pollinator vegetation. Rope wick applicators will be used to target taller vegetation such as Johnson grass in these areas. Herbicide treatments, rates, and acreage data will be maintained in the District Residency records and captured annually in the ODOT Herbicide Program Survey which will be shared with the ODOT CCAA implementation coordinator for inclusion in the Monarch CCAA Annual Report.

Managing Suitable Habitat Set Asides and Idle Lands

- Suitable monarch habitat set asides or idle lands for one or more growing seasons will be maintained undisturbed by temporary losses from construction, maintenance, or vegetation management. Presently these areas encompass ODOT Roadside Beautification wildflower areas, Oklahoma State University ODOT Research and Implementation Vegetative Management study sites, State welcome centers, and ODOT decommissioned rest areas and pullouts. These areas may change as the Department's maintenance needs dictate and/or new habitat areas become available.
- The CCAA implementation coordinator will work closely with the Department's Maintenance Districts to quantify these acres within the District's adopted acres on an annual basis and identify perspective additional suitable monarch CCAA defined idle lands.
- The ODOT CCAA NRP monitoring team will monitor these acres during the growing season and assist with developing idle land/set aside areas with the Maintenance Districts as they are identified.
- The CCAA implementation coordinator will coordinate with the Department's Maintenance Districts to determine habitat suitability of existing and newly identified idle lands. Any construction activities that will affect these areas will be monitored from the ODOT 8 Year Construction Work Plan 2022-2029 and acres adjusted accordingly. Any vegetative management actions needed to enhance idle land/set aside monarch habitat will be performed by the respective District's personnel or qualified contractors familiar with all Department safety policies and operating procedures outside of peak monarch breeding and migration season. The ODOT CCAA implementation coordinator will track and report any changes to these acres in the Monarch CCAA Annual Report.

Monitoring Procedures:

- ODOT is responsible for monitoring at least 30 monitoring site locations in accordance with established protocol outlined in Section 14.2 and the June 2021 addendum of the Monarch CCAA. Monitoring data will be recorded to the Rights of Way as Habitat Working (ROWHWG) Group's Geospatial Habitat Database Survey 123 or when field conditions dictate, to the Tier 3 Pollinator Scorecard data collection hardcopy form. Random selection of monitoring sites will be rotated biennially using a combination of GIS desktop random plot generation, idle land/set aside locations, and permanent monitoring site locations.
- Field monitoring will be conducted by the ODOT CCAA NRP monitoring team. The CCAA implementation coordinator will provide an annual monitoring work plan to the NRP monitoring team and appropriate ODOT CCAA team contacts by March 31.
- Site location monitoring will occur during the growing season to coincide with the monarch spring and fall migration season. These dates are usually between April and October, but

variances in weather conditions can occur and those conditions will be assessed during the monitoring season. Monitoring data will be due to the CCAA Implementation coordinator by November 15.

- Data will be uploaded to ROWHWG Geospatial Database and analyzed by January 2 to provide an internal report to ODOT CCAA Team contacts and to confirm data in the ROWHWG Geospatial Database used in submission of the Department’s annual Monarch CCAA Report.

Tracking and Reporting:

- Tracking adopted acres contributions will be compiled throughout the year as conservation measures activities are completed and these measures are reported as described in the respective Conservation Measure sections above.
- The CCAA implementation coordinator will collaborate with the Department Maintenance Districts to confirm adopted acre’s location, potential CCAA partner overlap, and conservation measure activities.
- Tracking of idle land/set asides will be captured during site location monitoring activities and reported to the CCAA implementation coordinator.
- The CCAA implementation coordinator will track location, date completed, potential CCAA partner overlap, and all information relevant to the adopted acres contribution and enter that data into the CCAA internal report spreadsheet for inclusion in the CCAA annual report.

Overlap Accounting:

- The ODOT CCAA implementation coordinator will work with the ODOT Maintenance Districts to estimate potential overlap acres with other CCAA partner organizations in the Department’s adopted acres.
- The implementation coordinator will use the ROWHWG Geospatial database public dashboard to reference any State CCAA registered partners and confirm with the Districts location and estimate of overlap.
- Overlap accounting data will be captured by the ODOT NRP monitoring team during annual monitoring activities and during annual conservation measure tracking.
- Areas of known overlap will be quantified via GIS and opportunistically during monitoring site surveys and reported to the CCAA implementation coordinator for inclusion in the CCAA annual report.

Reporting

- ODOT will prepare an annual report summarizing the Department’s compliance with CCAA requirements associated with implementation, tracking, monitoring, and reporting as outlined in the Department’s Monarch CCAA Certificate of Inclusion executed on November 30th, 2021.

- The CCAA implementation coordinator will provide a draft annual report to the listed ODOT CCAA contacts for review prior to submission to the Monarch CCAA.
- The draft annual report will be prepared according to the following deadlines:
Field data compiled - November 15
Conservation Measure activity tracking confirmed - December 15
Internal CCAA contact team review draft available - Jan 2
Internal draft review completed - Jan 22
- The CCAA implementation coordinator will submit the annual report to the Monarch CCAA UIC Administrator no later than January 31.

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

ODOT's CCAA Certificate of Inclusion and accompanying application proposes a targeted adoption rate of 12,038 acres annually. To meet this target, the Department has identified the need for a 4-year interim ramp up period. This interim period will allow for operational adaptations to internal Department modernization to occur while keeping the Department on track with CCAA related commitments and activities.

Anticipated intermediate adopted acre targets during the ramp up period are listed below:

Year 1 = 1,350 acres
Year 2 = 4,913 acres
Year 3 = 8,474 acres
Year 4 = 12,038 acres

Funding:

Funding for the Monarch CCAA Implementation is provided through existing Department Funds and current staff. Funding for native revegetation, monitoring and reporting activities will be through the Environmental Programs Division budget. Funding for vegetation management will be through the corresponding Field District Maintenance budgets.

II. Quality Control Details

Applicable Quality Control Procedures:

All aspects of this implementation plan will be undertaken in accordance with current local, State, and Federal laws and applicable rules, regulations, policies, and procedures of the Oklahoma Department of Transportation. The Department further agrees to comply with the requirements of the executed Certificate of Inclusion under the Monarch CCAA/CCA and the associated USFWS issued Enhancement of Survival Permit.

Revisions to this Implementation Plan:

November 3 2021: ODOT Monarch Butterfly CCAA Implementation Plan Completed
November 3 2021: ODOT CCAA Implementation Plan submitted to UIC-ERC Monarch CCAA Program Administrator.