

# Approved Application

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

## Application for Certificate of Inclusion in the CCAA/CCA

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### I. Applicant Information

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This application contains confidential or sensitive business information per Section 8 of the Agreement.  
(Check the box if answering "yes").

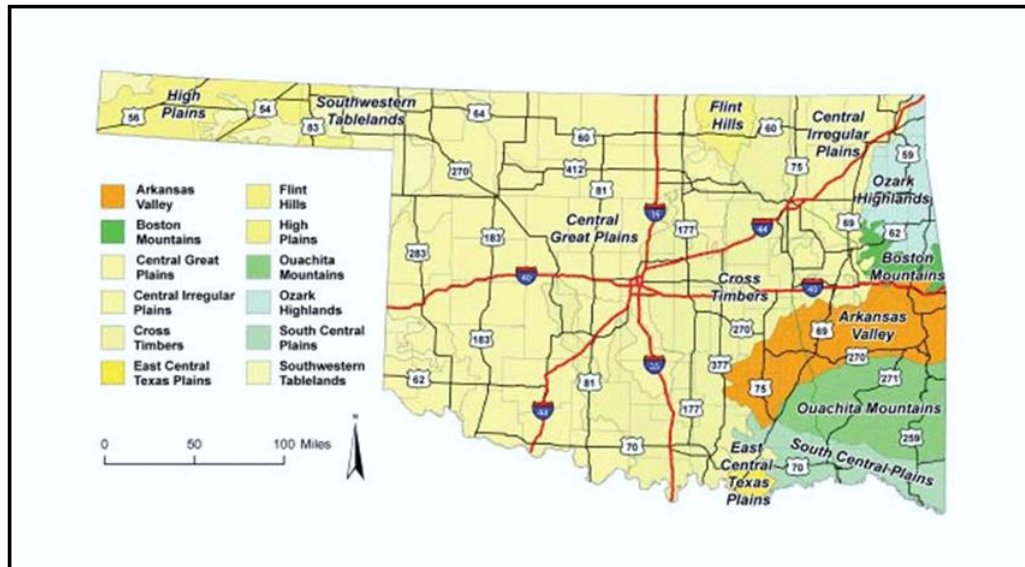
## II. Description of Existing Conditions

a. Type of use and operations (up to three, as applicable) being enrolled:

- **Highways/Interstates**

b. Provide a short (1-2 paragraph) summary of the system of lands being enrolled in the Agreement. Describe:

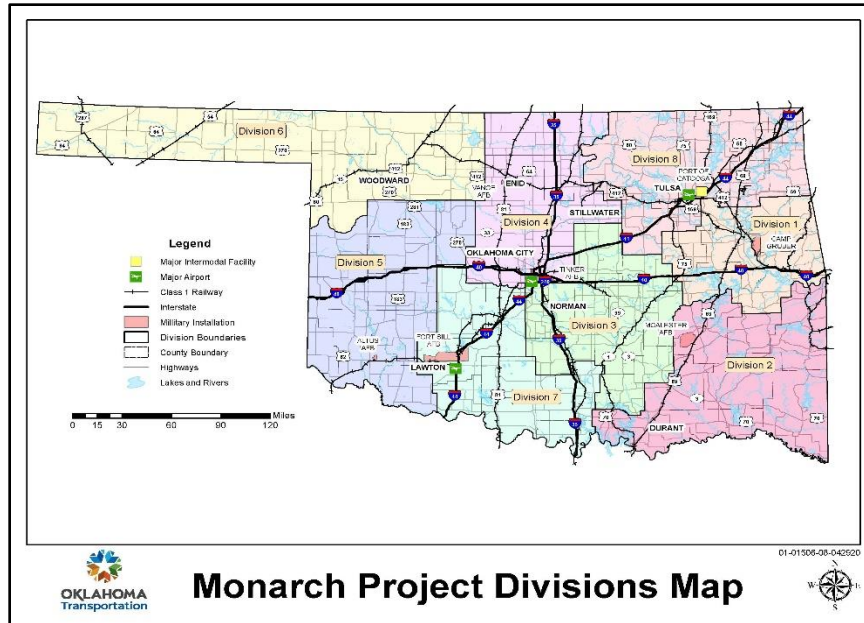
**The State of Oklahoma land area occupies approximately 69,000 square miles and includes portions of 12 ecoregions (Woods et al. 2005) (Fig.1). Elevation ranges from 289 feet in the southeast to 4,973 feet above sea level in the northwest with a mean elevation of 1,300 feet above sea level. These lands areas are dominated by vast plains, elevated karst plateaus, hills, and folded, low mountains.**



**Fig.1 Oklahoma Ecoregions**

*Source: Oklahoma Natural Heritage Inventory*

**The State Transportation System includes State, Federal, and Interstate highway and encompass 30,389 lane miles of roads, with 9,646 lane miles of National Highway System (NHS) pavements and 20,743 lane miles of non-NHS pavement. Additionally, there are 6,744 bridges maintained by ODOT, including 2,790 NHS bridges (Fig.2). (Oklahoma Department of Transportation 2019-2028 Transportation Asset Management Plan)**



**Fig.2 ODOT State System Field Divisions**

Source: Strategic Asset & Performance Management Division ODOT

- Describe your land management ability:

**ODOT owns and manages all its land system.**

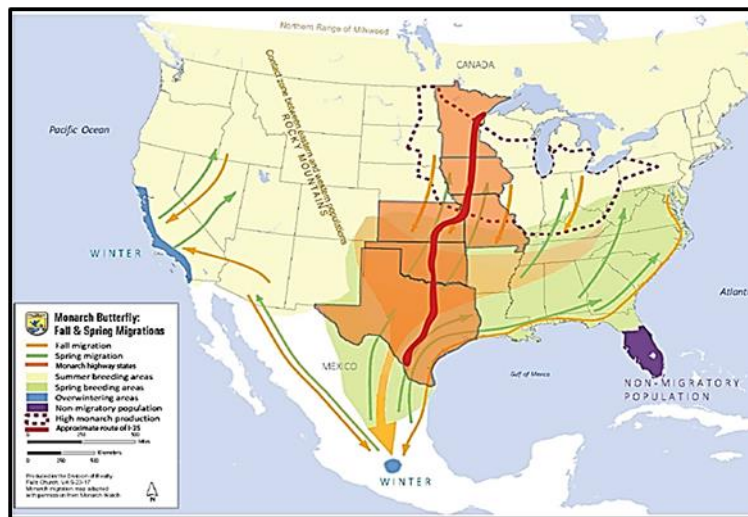
- c. Summarize the covered activities included within your enrollment. If enrolling the entire list of activities included in Section 5 of the Agreement, note as such. If only enrolling for a subset of activities, then list or summarize which categories of, or specific, covered activities are included.

**ODOT covered transportation activities that may impact monarch butterflies through habitat disturbance or removal and/or direct take of individuals encompass maintenance and modernization of existing infrastructure on CCAA enrolled lands. These activities occur on existing infrastructure as well as accompanying lands that are maintained to support operation infrastructure as described in II.b. Examples of such activities include general operation management of State roadways and access routes, vehicle operations associated with construction, vegetative management, surveys and geotechnical exploration, facilities management and maintenance, temporary staging and storage, mitigation land management, and emergency response access and repair.**

- d. Provide a short (1-2 paragraph) description summarizing monarch habitat availability and the conservation measures you envision your organization contributing to the Agreement. Section V of this application includes a table with check boxes to indicate the general measures that will be implemented. More specific details will be requested in the Implementation Plan to be submitted after the Application is approved.

**ODOT acknowledges that conservation measures (CMs) designed to address restoration, management, and maintenance of habitat provides the greatest net benefit for the species while still meeting operational needs. It is expected that as the ODOT CCAA implementation plan is developed over the next year CMs will be refined as to applicability, seasonality, frequency, location, and timing to achieve adopted acre targets. However, opportunities for enhancement and suitable habitat already exist within in the ODOT land system in the form of roadside wildflower plots established throughout the state and wetland mitigation lands that have suitable upland native vegetation. Other areas of high pollinator value include highway interchanges, rest areas and visitor centers, and roadside backslopes and benches.**

**Additional suitable habitat exists on the ODOT System in the form of the Monarch Joint Venture Monarch Highway initiative. Designated in 2016, Oklahoma joined six other states along the 1,569-mile Interstate 35 monarch flyway corridor (Fig.4) to install habitat strips as part of a larger habitat highway concept. These island strips have continued to provide resources for migrating monarchs since their installation.**



**Fig.4 Interstate 35 Monarch Highway**

Source: Monarch Joint Venture: [WWW.MONARCHHIGHWAY.ORG](http://WWW.MONARCHHIGHWAY.ORG)

- e. Attach a map or GIS files showing the location and extent of the enrolled lands. To the greatest extent practical, provide maps that display parcel and/or corridor route locations for areas included within your enrolled lands. Describe the boundaries or limits used to delineate enrolled lands versus lands excluded from the Agreement.

### Maps attached

- f. Describe in a short (1-2 paragraph) summary any constraints that affect your ability to implement conservation measures or to address key threats. Management constraints are limitations on your management controls that may result from laws

and regulations, land or easement ownership requirements, organizational policies, or management capabilities. *Note: There is a separate field in Section IV.b. for proposing a schedule for phasing in conservation measure adoption over time.*

**No constraints identified at this time. ODOT expects that management activities can meet the conservation commitments.**

- g. Provide a summary of any existing agreements, permits, or other authorizations your organization may have regarding incidental take coverage for other Federal-listed endangered species. For example, list any habitat conservation plans (HCPs) or incidental take permits (ITAs) authorized to your organization, or other candidate conservation agreements (CCA/CCAA) or safe harbor agreements (SHA) you are enrolled within. Consultations or programmatic guidance (e.g. 4(d) guidance for listed bats, or USFWS guidance for listed invertebrates or plants) also apply.
- **USFWS-FHWA-ODOT PBO Agreement for the American Burying Beetle (*Nicrophorus americanus*) for years 2015-2024.**  
**USFWS Reference # FWS/R2/OKES/21440-2015-F-0302.**  
**This PBO is in cooperation with ODOT and FHWA as an effort to provide streamlined compliance to meet current and anticipated needs of ODOT's proposed transportation system construction activities, while minimizing and offsetting impacts to the American burying beetle.**
  - **Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-eared Bat, Revised February 2018, USFWS Consultation Code: 09E00000-2016-F-0001**  
**The range wide consultation and conservation strategy was developed cooperatively with FHWA, FRA, and FTA and Regions 2, 3, 4, 5 and 6 of the USFWS addresses the conservation needs of two listed bat species, Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*). The programmatic biological opinion was issued in 2016 and was revised in 2018 to aid in the consultation process related to transportation projects and provide a consistent approach to conservation for both bat species.**
- h. In accordance with the USFWS Conference Opinion prepared for the *Nationwide Candidate Conservation Agreement for Monarch Butterfly for Energy and Transportation Lands*, provide documentation to support the USFWS Section 7 evaluation of covered activities and their potential jeopardy to current, or proposed, Federal-listed plant species and designated critical habitats.

Provide a summary of:

- i. A list of the current or proposed Federal-listed species within the enrolled lands and critical habitats that overlap with enrolled lands

**State IPac List Attached**

- ii. Covered activities to be included for evaluation

**Covered in Section II.c**

- iii. The geography where impacts may occur

**Covered in Sections II.b and II.d**

- iv. Which activities are, or are not, subject to S7 elsewhere?




**Identified in the attached Avoidance and Minimization Measures (AMMS)**

- v. What avoidance and minimization measures are currently used by the Applicant for each individual current, or proposed, Federal-listed plant species and designated critical habitat.

**ODOT AMM table and text included**

**III. Agreement to Participate in the Monarch CCAA/CCA**

In witness of, the participating agency hereto has, as of the last signature date below, executed this Candidate Conservation Agreement with Assurances to be in effect as of the date the USFWS issues the permit.

 <hr/> Applicant(s) Signature	 Click or tap here to enter text. <hr/> Printed Name, Title	Date <u>4/30/2020</u> <hr/> Date
 <hr/> Program Administrator	Iris Caldwell, Program Manager <hr/> Printed Name, Title	10/20/2020 <hr/> Date
N/A <hr/> U.S. Fish and Wildlife Service	N/A <hr/> Printed Name, Title	N/A <hr/> Date

The enrolled Partner must adhere to all terms and conditions of the Agreement. According to the pending listing finding, the primary threat to monarchs is habitat loss and degradation. Therefore, in order for this Agreement to address the conservation needs of the monarch, the conservation measures selected in the table below must be implemented by all representatives of the applying organization on the enrolled system of lands.

To remain in compliance with the Agreement, as an enrolled Partner, you agree to:

1. Abide by all terms of the Agreement, including specific management strategies for each conservation measure as designated in the application to minimize risk of harm to monarchs on enrolled lands. Terms also include provisions associated with reporting, paying fees, and alerting UIC if there are compliance issues and/or unforeseen/changed circumstances. Administrative fees will be due prior to full execution of the Certificate of Inclusion, then on an annual basis from the date of the fully executed Certificate of Inclusion, or subject to another previously agreed upon date between the Partner and Program Administrator.
2. Complete a CCAA/CCA implementation plan within one year from the date of the fully executed Certificate of Inclusion. A CCAA/CCA implementation plan will consist of a short plan created by the Partner describing:
  - i. Roles and responsibilities - who (within their organization) is involved in implementation of the conservation measures, and applicable communication structure, and
  - ii. How the Partner intends to implement the conservation measures, tracking, monitoring, and reporting required in the Agreement. An existing IVM plan (if consistent with conservation measures proposed in the application) may suffice for this description or provide the basis for one.
    - General timing and prescriptions for treatments,
    - Timing expectations for tracking, monitoring, and reporting,
    - Adopted acres target ramp up periods and targets (if applicable),
    - Approach to conducting sampling for effectiveness monitoring,
    - Adherence to any applicable quality control procedures internal to the Partner organization, and
    - Funding for implementation (whether funding for conservation measures and other requirements comes from capital expenditures or operations and maintenance budgets),
    - How they plan on using best management practices and guidance available on the Monarch Agreement Implementation Toolbox website.
3. Acknowledge that, as a Partner, the organization is responsible for their own compliance with applicable state and Federal laws related to listed species, historic and cultural resources, and other environmental resource protection. The organization also acknowledges that they will communicate and coordinate with underlying landowners (as applicable) and follow terms and conditions of the Enhancement of Survival (EOS) Permit issued to the Program Administrator. The Service's guidelines for complying with Section 106 of the National Historic Preservation Act are included as part of Appendix C (Supplemental Information) in the Agreement.
4. Implement Partner-selected conservation measures within the first full calendar year following the full execution of an individual Certificate of Inclusion. If implementation within the first full calendar year is not practical, the Applicant may propose an



alternative implementation timeline (up to five years) to the Program Administrator for review and approval in Section IV.b. below.

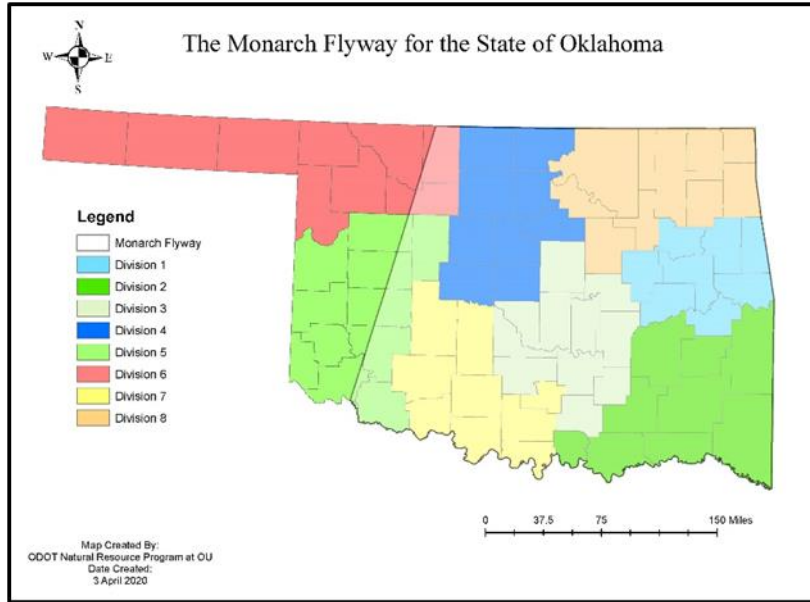
5. Achieve the target for expected adopted acres annually based on the sector-specific adoption rates, or an approved variance during the waiver period, over the duration of the Partner's enrollment within the Agreement. Should actual annual implementation tracked be below the annual adopted acres target(s) identified, then the Partner will adhere to the appropriate scenarios highlighted in Section 10 of the Agreement (Adaptive Management).
6. Track the location (statewide or finer scale) of where and date when (final month) conservation measures are implemented for compliance verification as described in Section 7.3 of the Agreement (Obligations of the Parties).
7. Conduct effectiveness monitoring within a subset of locations where conservation measures are implemented for compliance verification as described in Section 14 of the Agreement (Monitoring Provisions) and Section IV.c. below.
8. Provide the Service and the Program Administrator, or their agreed upon representatives, access to the enrolled property to identify or monitor monarchs and their habitat, evaluate conservation measures, and monitor effectiveness and compliance with individual Partners at mutually agreeable times. All applicable safety trainings and appropriate measures will be communicated to Program Administrator, the Service, or their designee by the Partner in a timely manner prior to site access. Any and all representatives of Program Administrator, the Service, or their designee must adhere to all Partner-specific and site-specific health and safety compliance requirements, including associated training, certifications (if applicable), and protocols.
9. Allow the Program Administrator to share, as requested, with the Service or other Agreement Partners, habitat and other planning or monitoring information related to the enrolled properties. Information sharing will not include any confidential business or proprietary information per the terms and conditions specified in Section 8 (Confidentiality).

#### **IV. Adopted Acres Contribution**

By enrolling the above-mentioned lands in the Agreement and adopting the conservation measures selected below at the agreed-upon rate, our organization is voluntarily committing to improving monarch habitat through these practices and to cooperate with the requirements of the Agreement. Adopted acres are the primary measure of the net conservation benefit provided.

- a. Narrative explanation of calculation of the annual adopted acres target.

**Enrollment of proposed lands on the ODOT system takes into consideration that monarch butterflies may occur on any portion of the system based on existing, historic, or potential suitable habitat for monarchs across their migration and lifecycle range (Fig. 3)**



**Fig.3 Oklahoma Monarch Migration Flyway**  
 Source: Christopher Rocha, ODOT Natural Resources Program

**Within these enrolled lands, adopted acres are where conservation measures may be used to provide suitable monarch habitat to support breeding and/or foraging requirements. Excluding paved highway surface and highway toll roads, preliminary ODOT enrolled and adopted acre numbers have been calculated using the amount of mowable acres within the land system (Table 1) and the CCAA Sector Specific Adoption Rate of 8%. ODOT proposes to enroll 150,472 acres with an adopted acre target of 12,038 acres.**

Numbers from ODOT Maintenance	State	Div 1	Div 2	Div 3	Div 4	Div 5	Div 6	Div 7	Div 8
Total Mowable Acres	150,472.00	14,683.70	20,459.00	21,789.00	19,478.00	19,815.00	15,751.00	17,431.00	21,063.00
Adopted acres 8% of Total	12,037.76	1,174.70	1,636.72	1,743.12	1,558.24	1,585.20	1,260.08	1,394.48	1,685.04
Adopted Mowable Miles	1,986.23	193.82	270.06	287.61	257.11	261.56	207.91	230.09	278.03

**Table.1 ODOT Adoption Rate**  
 Source: ODOT Strategic Asset and Management Division and Kenny McMahon, ODOT Natural Resources

- b. Proposed implementation schedule – If the targeted adoption rate will not be achieved during the first full calendar year of enrollment, include an estimate of the anticipated interim adoption rate(s), and the expected interim adopted acres target(s), for each of the interim years until the full target adoption rate is expected to be met (Note: Interim period cannot last longer than 5 years).

**ODOT expects that the first year following the execution of the Certificate of Inclusion will require prioritization of adopted acres and targeting conservation measures on the most suitable habitat acres. Expected acres of monarch habitat rehabilitated, enhanced, or created in the first year will equal 1,350 acres. During the first year ODOT will also refine provisions and procedures of the CCAA Implementation Plan.**

**Over the following four years ODOT proposes to work with the CCAA Program Administrators and the USFWS to implement conservation measures and monitoring for an amount of 2,672 acres annually until achieving the full required adopted acres target.**

- c. Proposed effectiveness monitoring schedule per Section 14 of the Agreement – indicate whether monitoring will be submitted annually or propose a plan that will involve submitting monitoring results at least every 3 years.

**ODOT will be responsible for annual compliance tracking and reporting to the CCAA Program Administrator as part of the Agreement Certificate of Inclusion. This tracking and reporting will include information on identified conservation measures, when and where applied, and percent of net conservation benefit contributed to the adopted acres target.**

**ODOT Natural Resources Program (NRP) will implement an effectiveness monitoring program within one year on randomly selected sample plots. These plots will reflect each type of conservation measure applied and represent the geographical extent of the adopted acres. Data from these plots will be entered into geospatial database such as Esri Survey 123. Monitoring protocols will be consistent with the Monarch Joint Venture's Roadside Habitat for Monarchs assessment protocol (NCHRP; Monarch Joint Venture 2019b).**

**A rapid assessment model will allow ODOT NRP to address potential and existing suitable habitat as well as adapt management actions while adhering to milkweed density and nectar resource targets. It is expected that 50 sample plots will be monitored on ODOT adopted acres.**

## **V. Conservation Measures**

By enrolling in this Agreement, the Partner will identify the suite of applicable conservation measures that:

- a) Address each of the key threats identified within control of the Partner.
- b) Can be implemented over the course of the agreement by the Partner; and
- c) Can be conducted on a sufficient quantity of lands to achieve the adopted acres target resulting from the applicable adoption rate(s).

Each key threat identified within the Agreement will be addressed, within the control of the Partner, by selecting one or more corresponding conservation measures. The Service and Program Administrator recognize each Partner manages a unique system of lands and that conservation measure implementation will be based on site-specific conditions. Partners are expected to select one or more conservation measures to address each key threat within their control and achieve the expected annual adopted acres target. The Service recognizes not all conservation measures listed for a particular threat will be appropriate for a given property. Site-specific conservation measures will be based on the key threats present and the management ability of the Partner towards those threats.

Supplemental conservation measures are activities that do not directly address key threats identified, but still have important partnership and logistical contributions to the undertaking of this Agreement and monarch conservation. However, as activities, they do not directly result in an on-the-ground benefit (i.e. adopted acres). Annual reporting of supplemental conservation measures has the benefit of documenting additional Partner efforts and investments, providing more in-depth monitoring to answer important management questions, and build confidence in the implementation of the Agreement. Supplemental measures can also help reduce the annual administrative fee required.

The following threats, conservation measures, current or future practices, and comments are identified for this enrolled property. Descriptions and examples of conservation measures are included after the table.

Key Threat/ Limiting Factor	Conservation Measures	Pre-Agreement Practice	Post-Agreement Practice	Comments (note here if measure applies to only some ROW or parcels and if there are plans to increase the activity over time)
Lack of Habitat and Nectar Resources (General)	Seeding and planting to restore or create habitat	<input type="checkbox"/> routine <input checked="" type="checkbox"/> occasional <input type="checkbox"/> none	<input checked="" type="checkbox"/> routine <input type="checkbox"/> occasional <input type="checkbox"/> none	<b>Will apply to some ROW areas, parcels, and will increase over time</b>
	Controlled grazing to promote suitable habitat	<input type="checkbox"/> routine <input type="checkbox"/> occasional <input checked="" type="checkbox"/> none	<input type="checkbox"/> routine <input type="checkbox"/> occasional <input checked="" type="checkbox"/> none	N/A
	Brush removal to promote suitable habitat	<input type="checkbox"/> routine <input type="checkbox"/> occasional <input checked="" type="checkbox"/> none	<input checked="" type="checkbox"/> routine <input type="checkbox"/> occasional <input type="checkbox"/> none	<b>Will apply to some ROW areas, parcels, and will increase over time</b>
	Suitable habitat set asides or idle lands for one or more growing seasons	<input type="checkbox"/> routine <input type="checkbox"/> occasional <input checked="" type="checkbox"/> none	<input type="checkbox"/> routine <input checked="" type="checkbox"/> occasional <input type="checkbox"/> none	<b>Will apply to some ROW areas, parcels, and will increase over time</b>

<b>Key Threat/ Limiting Factor</b>	<b>Conservation Measures</b>	<b>Pre- Agreement Practice</b>	<b>Post- Agreement Practice</b>	<b>Comments</b> (note here if measure applies to only some ROW or parcels and if there are plans to increase the activity over time)
Loss of Habitat and Nectar Resources (Mowing Practices)	Conservation mowing to enhance floral resources during migration and breeding	<input type="checkbox"/> routine <input checked="" type="checkbox"/> occasional <input type="checkbox"/> none	<input checked="" type="checkbox"/> routine <input type="checkbox"/> occasional <input type="checkbox"/> none	<b>Will apply to some ROW areas, parcels, and will increase over time</b>
Loss of Habitat and Nectar Resources (Herbicides)	Targeted herbicide treatment of undesirable vegetation using herbicide best management practices	<input checked="" type="checkbox"/> routine <input type="checkbox"/> occasional <input type="checkbox"/> none	<input checked="" type="checkbox"/> routine <input type="checkbox"/> occasional <input type="checkbox"/> none	<b>Applies to ROW areas, parcels, and will increase over time</b>

<b>Supplemental Measures</b> (Not tied to specific key threats, but help improve overall conditions for monarchs, or promote conservation actions.)				
<b>Supplemental Measures</b>	<b>Pre- Agreement Practice</b>	<b>Post- Agreement Practice</b>	<b>Comments</b> (note here if measure applies to only some ROW or parcels and if there are plans to increase the activity over time)	
Use spatial modeling to prioritize areas for implementing conservation	<input type="checkbox"/> routine <input checked="" type="checkbox"/> occasional <input type="checkbox"/> no	<input checked="" type="checkbox"/> routine <input type="checkbox"/> occasional <input type="checkbox"/> no	<b>Applies to ROW areas and will increase in ROW areas and parcels over time</b>	
Minimize the spread of invasive species into areas of suitable habitat	<input type="checkbox"/> routine <input checked="" type="checkbox"/> occasional <input type="checkbox"/> no	<input checked="" type="checkbox"/> routine <input type="checkbox"/> occasional <input type="checkbox"/> no	<b>Will apply to some ROW areas, parcels, and will increase over time</b>	
Incorporate pollinator habitat-focused objectives into vegetation management operations	<input type="checkbox"/> routine <input type="checkbox"/> occasional <input checked="" type="checkbox"/> no	<input checked="" type="checkbox"/> routine <input type="checkbox"/> occasional <input type="checkbox"/> no	<b>Will apply to some ROW areas, parcels, and will increase over time</b>	
Conduct additional pollinator habitat monitoring protocols beyond those required for CCAA effectiveness monitoring.	<input type="checkbox"/> routine <input type="checkbox"/> occasional <input checked="" type="checkbox"/> no	<input type="checkbox"/> routine <input checked="" type="checkbox"/> occasional <input type="checkbox"/> no	<b>Will apply to some ROW areas, parcels, and will increase over time</b>	

<p>Promote supplemental pollinator conservation efforts</p>	<p><input type="checkbox"/> routine  <input checked="" type="checkbox"/> occasional  <input type="checkbox"/> no</p>	<p><input checked="" type="checkbox"/> routine  <input type="checkbox"/> occasional  <input type="checkbox"/> no</p>	<p><b>Applies and will increase over time</b></p>
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