

FINDINGS AND RECOMMENDATIONS
FOR ISSUANCE OF SECTION 10(a)(1)(A) ENHANCEMENT OF SURVIVAL
PERMIT and ASSOCIATED CANDIDATE CONSERVATION AGREEMENTS

*(Nationwide Candidate Conservation Agreement for Monarch Butterfly on Energy and
Transportation Lands: an Integrated Candidate Conservation Agreement with Assurances and
Candidate Conservation Agreement)*

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1. Introduction and Background

We, the U.S. Fish and Wildlife Service (Service) began working collaboratively with the University of Illinois-Chicago Energy Resources Center (UIC) to develop a programmatic Candidate Conservation Agreement with Assurances with an integrated Candidate Conservation Agreement (Agreement) for the monarch butterfly (*Danaus plexippus*) in April 2018. The Agreement was envisaged by the Rights-of-Way as Habitat Working Group as a strategy to promote voluntary conservation action among landowners. The Working Group builds broad industry engagement in strategies that benefit the monarch butterfly and other pollinator species of concern. As facilitator of the Working Group, UIC established an advisory team of over 30 energy, transportation, and conservation partners to assist in development of the Agreement. The Federal Highways Administration supported this collaborative effort by providing funding and technical assistance, and were involved in the conceptualization and preparation of the Agreement.

The Service received the proposed Agreement and application from the UIC for a Section 10(a)(1)(A) Enhancement of survival permit (Permit), through a Candidate Conservation Agreement with Assurances (CCAA) in December 2018. The proposed application and Agreement met the application requirements put forth by 50 CFR 17.32(a)(1), 50 CFR 17.32(d)(1), and 50 CFR 13.12. The requested Permit is to be issued to the UIC, as the Program Administrator. If approved, the Program Administrator will enroll eligible applicants¹ into the Agreement through Certificates of Inclusions (CI). Once an Applicant receives a signed CI, they formally become a Partner to the Agreement and commit to using conservation measures to maintain, enhance, and create monarch habitat on a portion of enrolled lands. Should the monarch be listed, incidental take on non-Federal lands would then be covered by the Permit, and following reinitiation of intra-Service consultation, incidental take on Federal lands would be covered by a biological opinion. The current conference opinion may be adopted as the biological opinion if no significant new information is developed and no significant changes to the Federal action have been made that would alter the content of the conference opinion.

The Service involved the public by making a Notice of Availability for the draft Agreement and preliminary determination as a categorical exclusion under the National Environmental Policy Act (NEPA) available for review and comment. These documents were published in the Federal

¹ Eligible applicants are non-Federal entities or organizations that manage lands associated with energy and transportation uses that are interested in participating in the Agreement and undertake the application steps detailed within Section 4.4 of the Agreement. Eligible Applicants include non-Federal organizations and private or publicly owned companies managing lands associated with energy and transportation infrastructure within the Covered Area. Eligible Applicants have the authority and control to implement conservation measures throughout their system of enrolled lands through their property rights (e.g., fee-title ownership, land management and access permits, easements, etc.) or statutory authority. Applicants may be enrolled in this Agreement through a Certificate of Inclusion.

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Register on April 15th, 2019 (see Docket FWS-R3-ES-2019-0007). Public comments on the Agreement and preliminary NEPA determination were requested by June 14th, 2019.

Following the public review and comment period, the Service reviewed input and worked with UIC to update the Agreement as appropriate. The Service and UIC also worked directly with the Farm Bureau to address specific comments regarding the use of conservation measures on easement and leased lands. Considering the updated Agreement we completed our intra-service Section 7 biological and conference opinion, prepared the analysis and findings (contained in this document) for the enhancement of survival permit, and drafted conditions of the proposed permit.

Documents used in the preparation of this Statement of Findings and Recommendations include the “Nationwide Candidate Conservation Agreement for Monarch Butterfly on Energy and Transportation Lands: an integrated Candidate Conservation Agreement with Assurances and Candidate Conservation Agreement”, an associated environmental action statement for categorical exclusion under NEPA, and the Service's Section 7 biological and conference opinion on the proposed permit. Other supporting materials include the Notice of Availability and associated documents, public comments, draft permit conditions, and the Solicitor’s review of the approach to net conservation benefit.

2. Description of the Proposed Action

The U.S. Fish and Wildlife Service (Service) proposes to approve and sign the Candidate Conservation Agreement with Assurances with an integrated Candidate Conservation Agreement (Agreement) and issue an associated enhancement of survival permit (Permit) to the University of Illinois at Chicago (Program Administrator) under the authority of section 10(a)(1)(A) of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), and the Service’s Final Policy for Candidate Conservation Agreements with Assurances (64 FR 32726, June 17, 1999; Amended 81 Fed. Reg. 95164, December 27, 2016). The Permit and Agreement would be in effect for a period of 25 years, and if monarchs are listed as threatened or endangered under the ESA during that time, the Permit would authorize incidental take with assurances² on non-Federal lands in accordance with the Agreement.

In addition, if monarchs were to be listed, the Service would review the Section 7 conference opinion on the Agreement and may adopt the conference opinion as a biological opinion, which would authorize incidental take on Federal lands in accordance with the Agreement. In accordance with 50 C.F.R. § 402.10(d), the incidental take statement provided in the Service’s

² On non-Federal Lands, the Permit provides assurances from the Service that additional conservation measures above and beyond those explained in the Agreement will not be required, and that additional land, water, or resource use limitations will not be imposed should monarch butterflies become listed as endangered or threatened under the ESA in the future.

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conference opinion on the Agreement does not become effective unless and until the monarch is listed and the conference opinion is adopted as the biological opinion issued through formal consultation. At that time, the opinion and Agreement will be reviewed to determine whether any take of monarchs or their habitat has occurred. Modifications of the opinion and incidental take statement may be appropriate to reflect that take. No take of monarch or their habitat may occur between the listing of monarchs and the adoption of the conference opinion through formal consultation, or the completion of a subsequent formal consultation. The conference opinion cannot be adopted as the biological opinion if significant new information is developed and/or if significant changes to the Federal action have been made that would alter the content of the conference opinion. Because the conference opinion is based on the best available science at the time of this decision, for the sake of this analysis regarding permit issuance, we will assume that the conference opinion will be adopted as a biological opinion if the monarch is listed. For the purpose of succinctness in this document and the Agreement, we refer to take on Federal lands as authorized through the incidental take statement of the biological opinion.

When the Service and Program Administrator sign the Agreement and the Service issues the Permit, the Program Administrator will be able to enroll eligible applicants into the Agreement and provide Permit coverage, and cover authorized by the incidental take statement through Certificates of Inclusions (CI). Once an eligible applicant receives a signed CI, they formally become a Partner to the Agreement and commit to using conservation measures to maintain, enhance, and create monarch habitat on a portion of enrolled lands (adopted acres³). The CIs convey incidental take authorization and assurances on non-Federal lands to the Partner in accordance to the Agreement and Permit conditions. Incidental take of monarch butterflies is authorized for covered activities and conservation measures on enrolled lands, as explained further in this document.

3. Covered Species and Covered Area

The Permit and incidental take statement in the biological opinion would authorize incidental take of the monarch butterfly throughout the Covered Area during the 25 year life of the Agreement if the species becomes listed as threatened or endangered under the ESA.

The Covered Area includes lands managed by energy and transportation partners within the migratory, non-migratory, breeding, and overwintering range of the monarch butterfly within the lower 48 states of the continental U.S. and identified as covered in individual CIs. The Covered

³ Within this Agreement, adopted acres are those lands within the enrolled lands where conservation measures are used to create, enhance, restore, sustain, or maintain habitat that supports monarch butterfly breeding and/or foraging requirements as documented by effectiveness monitoring. Adopted acres provide suitable monarch habitat and are the primary measure of Net Conservation Benefit within this Agreement.

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Area does not include documented overwintering sites⁴, such as the overwintering groves along the California coast, and requires specific conservation measures within the proximity of those areas (See 5.1, Conservation Measures, below). Within the Covered Area, Partners may enroll properties owned in fee title, as well as those lands on which Partners maintain leases, easements or other agreements that allow them to conduct the conservation measures and/or covered activities agreed to in their CIs. Eligible CI applicants are non-Federal, however applicants may have property interests across Federal lands (e.g., through easements, leases, or permits). For this reason, enrolled properties may include both Federal and non-Federal lands.

Enrolled lands will be described in documentation submitted with applications and incorporated into Partners' CIs, issued by the Program Administrator. This documentation includes maps or GIS files of the extent of lands enrolled, as well as a description of their use and operation, and a summary of existing information on monarch habitat availability and how many acres will be managed with conservation measures to enhance, maintain, and create habitat. A full list of CI application requirements is provided in Agreement Section 4.4 "Enrollment Process".

The Program Administrator will track and maintain records of enrolled lands, and provide this information to the Service in an annual report that quantifies the acres of enrolled lands and the acres maintained as monarch habitat (adopted acres). We anticipate up to 26 million acres are eligible for enrollment, although not all enrolled acres will be maintained as monarch habitat.

4. Types of Covered Activities

Covered activities are otherwise lawful activities that support vegetation management, general operations, maintenance, and modernization of energy and transportation lands. These activities are carried out on enrolled energy and transportation lands and are reasonably certain to cause take of monarch butterflies by removing or disturbing milkweed or flowering nectar resources (during the time of year when monarchs are present), or by taking monarchs directly (e.g., by crushing individuals, etc.).

The Agreement addresses the incidental take of monarch butterflies caused by a suite of activities across a number of transportation and energy sectors, however CI applicants select the activities relevant to their lands and projects to enroll in their CIs. Covered activities cannot result in incidental take of other ESA listed animals, or must be conducted in compliance with the terms and conditions of other existing incidental take statements (Section 7) or Section 10

⁴Overwintering sites are tracked by the U.S. Fish and Wildlife Service and the Xerces Society for Invertebrate Conservation. Identified locations for the western monarch population can be found by contacting the Xerces Society (monarchs@xerces.org) and/or accessing information on their website at <https://www.westernmonarchcount.org/Migratorymonarchs>. Documented locations for the eastern monarch population can be found by contacting the U.S. Fish and Wildlife South Carolina Ecological Services Field Office: <https://www.fws.gov/southeast/charleston/>.

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permits. Partners will develop and implement avoidance and minimization measures when they apply for a CI to ensure that covered activities do not jeopardize listed or proposed plants or destroy or adversely modify designated or proposed critical habitat of plants or animals. All covered activities are conducted in accordance with existing permits, easements, and agreements that allow the Partners to access and manage their enrolled lands. Covered activities do not include actions that pose significant environmental, socioeconomic, historic, or cultural impacts.

Applicants develop their CIs with technical assistance from the Program Administrator while applying for enrollment. After a CI is issued, Partners can add or remove measures through modification of the CI. Below are examples of the kinds of activities that applicants may choose to enroll into their CI. Agreement Section 5.4 “Covered Activities Checklist” lays out criteria that must be met for the incidental take of an activity to be considered covered. Partners aren’t required to fill out the checklist for their projects, but use it as reference during CI and project development, and must be able to demonstrate that the criteria were met for the activity receiving incidental take cover.

Examples of Covered Activities:

- General operations of energy and transportation lands including activities such as vehicle and equipment access, maintenance of enrolled roads and access routes, surveys and inspections, and emergency response.
- Maintenance and modernization activities such as structural repairs, replacement and maintenance of enrolled infrastructure and facilities, temporary staging and storage, and facility repairs, upgrades, and replacement of enrolled infrastructure.
- Construction associated with maintenance and modernization of enrolled infrastructure (for example, road, power line, energy substation, bridges, building, etc. on enrolled lands) that occurs substantially within the footprint of existing infrastructure⁵ and/or the accompanying lands are maintained to support operations of such infrastructure. For example, modernization could include construction of a rest stop within the rights-of-way of an existing road or the widening or addition of energy substations in existing transmission corridors that exist on enrolled lands. By contrast, modernization does not include the construction of new infrastructure (or activities associated with the construction of that new infrastructure) on newly acquired or previously undeveloped or unmaintained rights-of-way or parcels. Undeveloped land implies that the land has an absence of infrastructure. Once infrastructure is constructed independent of this

⁵ The Agreement uses the term “existing infrastructure” as a way of distinguishing types of modernization included as a covered activity in this Agreement. In this context, ‘existing’ refers to developed rights-of-way structures and related infrastructure enrolled in the Certificate of Inclusion. The maintenance and modernization of new roadways, pipelines, and facilities may be enrolled into the CI after the full project (all phases) has been completed with the appropriate permitting (separate from the CCAA) for that new development.

Agreement, the ongoing operation, maintenance, modernization, and vegetation management activities may be covered activities.

- Vegetation management is a covered activity on existing rights-of-way and owned lands to ensure safe and reliable operation of infrastructure and allow access needed for inspections, maintenance, and emergency response. Vegetation management for the purpose of creating, maintaining, and enhancing monarch butterflies (i.e., conservation measures) is also a covered activity, and further explained below in Section 5. “Conservation Strategy”.

5. Conservation Strategy

5.1. Conservation Measures

The programmatic Agreement addresses key threats to monarch butterflies on energy and transportation lands. These threats include the loss of habitat resulting from land conversion, herbicide use, and mowing. Partners have the ability to reduce and remove these threats and conserve monarch habitat by using conservation measures to restore habitat and modify their vegetation management and maintenance practices. Conservation measures increase the availability of milkweed and blooming nectar plants while monarchs are present on the landscape.

Strategies for increasing and improving monarch habitat vary depending on the ownership, safety concerns, regulations, and competing vegetation management objectives for a particular Partner and location. For these reasons, applicants select from a number of conservation measures to include in their CIs and have flexibility on where and when they are applied throughout their enrolled lands to achieve high quality monarch habitat while also meeting primary land management objectives (e.g., maintaining safe rights-of-ways that support transportation and energy distribution).

Applicants develop their CIs with technical assistance from the Program Administrator while applying for enrollment. After a CI is issued, Partners can add or remove measures through modification of the CI. In their application, a Partner identifies a suite of monarch conservation measures that:

- a) Address each of the key threats that are within their control;
- b) They can implement over the course of the term of their CI; and,
- c) They can conduct on enough lands to achieve the expected conservation benefit as explained below in Section 6 “Net Conservation Benefit Standard”

For each key threat in their control, applicants select one or more corresponding conservation measures that they will use to achieve the expected conservation benefit on enrolled lands. For example, a right-of-way manager conducting routine mowing and broadcast herbicide treatments

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would be required to address two key threats – habitat loss from herbicide use and mowing. To comply with the Agreement, that land manager would select conservation measures that address those threats, such as conservation mowing and targeted herbicide use. These conservation measures would then be implemented across a specified number of enrolled acres (adopted acres) to the extent needed to achieve the expected conservation benefit. In addition, applicants will work with UIC to describe, in their CI, how adaptive management will be applied to conservation measures, including a definition of thresholds that will result in management adjustments.

Within a year of obtaining a CI, Partners will develop individual implementation plans that step-down conservation measures with locally relevant considerations. Individual implementation plans will describe local or regional management considerations, define roles and responsibilities, and explain how and when specific measures would be applied on enrolled lands. Partners will include detail in their implementation plan on how they will use best management practices and guidance available on the Monarch Agreement Toolbox website (which will continue to be maintained and updated) to implement monarch conservation strategies and update implementation as appropriate. The Rights-of-Way as Habitat Working Group website will likely host the Monarch Agreement Toolbox, which will provide information from the Service and other conservation partners and be maintained and updated by the Program Administrator.

Specific conservation measures to increase availability of milkweed and blooming nectar plants while monarchs are present are described in brief below, and full descriptions are provided in Agreement Table 6-3 “Conservation Measures and Descriptions”:

- Planting local and native seed mixes that include milkweed and other blooming nectar plants
- Using early successional habitat development and management practices such as prescribed burning and controlled grazing
- Removing brush to promote monarch habitat
- Idling or setting aside suitable monarch habitat
- Modifying mowing practices to avoid periods of monarch breeding and migration
- Incorporating pollinator habitat objectives into Integrated Vegetation Management Plans
- Using targeted herbicide treatment to remove undesired plant species (limiting and avoiding broad spraying)
- Implementing best management practices to control invasive species

Some specific conservation measures are required for Partners who enroll lands within the range of the Western monarch population, or within a half mile of known overwintering aggregation sites. These measures are required because of the current tenuous status of the Western monarch

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population and the importance of nectar for some populations that are active in the Covered Area during the winter. These conservation measures are described in brief below, and full descriptions are provided in Agreement Table 6-4 “Conservation Measures Specific to Known Winter Aggregation Sites and the Western Population of Monarch Butterflies”:

- Maintain and enhance blooming nectar plants during winter months within a half mile of known winter aggregation sites
- In the West, avoid removing trees and shrubs at any time within a half mile of known winter aggregation sites
- Along the coast of California, do not plant milkweed
- Report all Western monarch observations to the Western Monarch Milkweed Mapper

In addition to the specific conservation measures summarized above, some partners may commit to additional, supplemental measures that provide indirect benefits for monarchs and other pollinating insects. These measures don’t contribute to the measured net conservation benefit of the Agreement, however the Program Administrator offers incentives to Partners who go above and beyond to include these measures in their CIs. Some of these supplemental measures are described in brief below, and full descriptions are in Agreement Table 6-5 “Supplemental Measures and Descriptions”:

- Development and implementation of spatial modeling to prioritize areas for monarch conservation
- Additional habitat monitoring such as making use of the Monarch Joint Venture Integrated Monarch Monitoring Program
- Promoting community driven conservation by providing small grants and technical assistance to support native pollinator plantings

5.2 Adoption Rate

The Agreement provides management flexibility by allowing applicants the discretion to enroll specific lands into their CIs, selecting appropriate covered activities and conservation measures, and applying conservation measures in ways that also allow for successful implementation of primary land management objectives. However, Partners must create, enhance, and/or maintain a specified proportion of enrolled lands as suitable monarch habitat⁶ annually in order to achieve the desired conservation outcome for monarchs and maintain compliance with their CIs.

⁶ For the purposes of this Agreement, suitable habitat for monarchs consists of lands that provide either milkweed or potentially flowering nectar plants (in Southern and Western states) that may support monarch breeding or foraging needs at times of the year when monarchs are present. The presence of suitable habitat is verified through the sampling conducted via effectiveness monitoring, which validates the presence of minimum expected density of milkweed or cover for potentially flowering nectar plants, depending on geographic location.

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The specified proportion of enrolled lands that must annually be managed to enhance, restore, and maintain suitable monarch habitat is referred to as the “adoption rate” and is sector dependent (Table 1). Suitable monarch habitat, for the purpose of this Agreement, is defined by the density of milkweed stems and the percent cover of blooming nectar plants. For Eastern and Midwestern states⁷ adopted acres must support a milkweed density of at least 150 stems/acre. Outside the Midwest and Eastern U.S. ecological factors, such as low precipitation and lack of rhizomatic milkweed species, may limit ability to establish high stem densities. In those areas, adopted acres must support at least 58 stems per acre. On adopted acres in the West and South, suitable habitat may also be demonstrated by the presence of at least 10% cover of blooming nectar plants.

Table 1. Sector-specific adoption rates required for enrollment in the Agreement. Partners would carry out monarch conservation measures on at least the percentage of their Enrolled Lands that corresponds to the Adoption Rates for each sector.

Adoption Rate/Sector and Subsector	Energy			Transportation		
	Transmission	Distribution	Generation	Highways (Interstate, U.S., State)	Highways (County, Local)	Rail
CCAA/CCA Adoption Rates	18%	1%	9%	8%	5%	5%

Adoption rates in the Agreement are intended to be at a level that a) is consistent with conservation expectations for attaining monarch conservation goals (Thogmartin et al. 2017 and MAFWA 2018); b) will provide a net conservation benefit target for participation; and, c) is based upon estimates of what is attainable, provided by a panel of industry partners. These rates reflect the range of landscapes, management abilities, and constraints facing each individual sector. Potential Partners representing multiple sectors and geographic regions assisted in the development of the adoption rates in the Agreement, which are slightly different from those in Thogmartin et al. (2017), and MAFWA (2018). Thogmartin et al. (2017) focused on the Midwest, but Partners will implement the Agreement throughout the 48 contiguous States. Therefore, the adoption rates in the Agreement are intended to reflect variation in ecological conditions across the plan area.

⁷ Midwest and Eastern US refers to CT, DE, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MO, NE, ND, NH, NJ, NY, OH, PA, RI, SD, VA, VT, WI, WV

5.3 Adaptive Management

The Agreement includes an adaptive management strategy that defines triggers or thresholds for when management adjustments must be made and provides resources through the Monarch Agreement Toolbox and website and technical assistance to ensure that Partners have the best available information when making management decisions. When adaptive management thresholds are triggered, the Programmatic Administrator and/or Partners will review the trigger, initial corrective action or management adjustment, and the anticipated response expected under the individual scenario to determine next steps. If adaptive management is triggered, a summary of the responding management adjustments will be included in the Partner's annual compliance reporting. Agreement Table 10-1 "Adaptive Management Strategies" provides full descriptions on the adaptive management elements, triggers, and anticipated responses. Partners also include adaptive management strategies in their CIs.

5.4 Monitoring and Reporting

Partners carry out the monitoring strategy in the Agreement and document whether conservation measures are effectively creating, enhancing, restoring, and sustaining habitat that supports monarch breeding and/or foraging requirements. If conservation measures are successful, monitoring plots demonstrate the adopted acres support suitable monarch habitat⁸. If monitoring results demonstrate that suitable habitat criteria have not been met, Partners adjust management practices at relevant locations to ensure adopted acres provide suitable habitat. Techniques, lessons learned, best management practices, and other resources that assist Partner's in making appropriate management adjustments will be stored in the Agreement Toolbox, which is available online and maintained by the Program Administrator.

The results of this effectiveness monitoring data are reported to the Program Administrator, as well as other information related to CI implementation and fulfillment of its provisions (e.g., compliance monitoring and reporting). Compliance tracking will require information on which conservation measures the Partners implemented, as well as when and where they were undertaken. Table 14-1 in the Agreement summarizes the data that the Partners will be expected to collect for compliance monitoring, and Table 14-2 in the Agreement summarizes the data Partners must collect for effectiveness monitoring.

The Program Administrator assembles annual reports to the Service for activities conducted under the Agreement by March 31 for the previous calendar year. Annual reports include results

⁸ For Eastern and Midwestern states adopted acres must support a milkweed density of at least 150 stems/acre. Partners in the energy sector are expected to support stem densities of at least 150 stems/acre, and transmission sector Partners are expected to support stem densities of at least 156 stems/acre. Outside the Midwest and Eastern U.S. adopted acres must support at least 58 stems per acre. On adopted acres in the West and South, suitable habitat may also be demonstrated by the presence of at least 10% cover of blooming nectar plants. Midwest and Eastern US refers to CT, DE, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MO, NE, ND, NH, NJ, NY, OH, PA, RI, SD, VA, VT, WI, WV.

of compliance and effectiveness monitoring, challenges noted during implementation or administration, adaptive management triggers observed, the number of Partners participating through Certificates of Inclusion, the total acres of managed Adopted Acres, the total lands enrolled under the Agreement, and the location of those lands.

6. Net Conservation Benefit Standard

The CCAA Policy (81 Fed. Reg. 95164, December 27, 2016) defines net conservation benefit (for CCAAs) as the cumulative benefits of the CCAA's specific conservation measures designed to improve the status of a covered species by removing or minimizing threats so that populations are stabilized, the number of individuals is increased, or habitat is improved. The benefit is measured by the projected increase in the species' population or improvement of the species' habitat, taking into account the duration of the Agreement and any off-setting adverse effects attributable to the incidental taking allowed by the enhancement of survival permit. The conservation measures and property-management activities covered by the Agreement must be designed to reduce or eliminate those key current and likely future threats on the property that are under the property owner's control in order to increase the species' populations or improve its habitat. In the case where the species and habitat are already adequately managed to the benefit of the species, a net conservation benefit will be achieved when the property owner commits to continuing to manage the species for a specified period of time, including addressing any likely future threats that are under the property owner's control, with the anticipation that the population will increase or habitat quality will improve.

This Agreement integrates a CCAA and CCA, and net conservation benefit is achieved by applying the adoption rate throughout all enrolled lands. With this approach, a specified proportion of monarch habitat (scaled to the specified number of enrolled acres) is provided annually and meets defined criteria (milkweed density and blooming nectar plants) to ensure habitat suitability and a conservation lift for monarchs. The adoption rate applies to all enrolled lands so that Partners may choose to enroll their entire system and count benefits from conservation measures performed throughout all enrolled lands, regardless of whether the underlying fee ownership is Federal or non-Federal. By encouraging Partners to enroll many lands, up to their entire right-of-way systems, the Agreement results in a greater overall number of adopted acres, and thus more acres of improved and maintained monarch habitat.

7. Assurances

Through the Agreement and Permit, the Service provides Partners assurances (as set forth in 50 CFR 17.22(d)(5) and 17.32(d)(5), for endangered and threatened species, respectively) should monarchs become listed as threatened or endangered under the ESA that no additional conservation measures nor additional land, water, or resource use restrictions for the monarch

butterfly on enrolled non-Federal lands, beyond those voluntarily agreed to and described in the Agreement, will be required should the monarch become listed in the future. The assurances apply on non-Federal lands and only where the Permit and the CI are being properly implemented. Although assurances are not provided on Federal lands, the Service's incidental take statement in the Section 7 conference opinion provides some regulatory predictability for enrolled managed lands that are under Federal ownership.

Exceptions to these assurances are described in Agreement Section 13.2 "Changed and Unforeseen Circumstances". If additional or modified conservation measures are deemed necessary to respond to changed circumstances, the Program Administrator and Partners will modify and implement conservation measures to ensure a net conservation benefit as described in the Agreement. Changed Circumstances provided for in the Agreement include "Changed Technology" associated with energy and transportation lands; "Emerging Science" relating to monarch biology and habitat needs, "New Federal Species and Critical Habitat Listing" which will trigger initiation of the Service's intra-agency consultation associated with the Agreement"; "Major Decline in Migratory Population of Eastern Monarch Butterflies" as demonstrated by the area of over-wintering habitat occupied in Mexico; "Decline in Western Population of Monarch Butterflies" as demonstrated by additional declines in annual winter surveys; and "Unintentional Habitat Conversion in Adopted Acres" as demonstrated by detection of habitat removal caused by inadvertent management.

8. Relationship of the Agreement to Section 7 Consultations

Private or public actions that are covered activities under the Agreement may also be subject to separate ESA Section 7 consultations if those actions are on Federal lands, are authorized, or are funded by Federal agencies. In these instances, incidental and direct take of monarch butterflies for covered activities carried out by Partners is authorized through the incidental take statement issued with the Service's section 7 biological opinion and conveyed to Partners through the CI. Because this take is authorized in the biological opinion, Federal action agencies⁹ need not consult on impacts to monarch butterflies for covered activities carried out by Partners. Incidental and direct take of monarch butterflies for covered activities carried out by Partners is conveyed through CIs and is subject to the obligations in the CI and Agreement. Agencies that fund or authorize activities that may affect listed or proposed species other than the monarch, or designated or proposed critical habitats, must still consult separately with regard to those effects. The Service's biological opinion, and the incidental take statement provided with the opinion, address only effects to the monarch.

⁹ The Service is the Lead Federal Agency and has analyzed the incidental take of monarchs that may occur due to actions taken under the Agreement. The Service will provide documentation of this designation through a memo to other Federal agencies and Partners (50 CFR 402.07). The Service may also develop additional guidance for Partners and other Federal agencies to assist in this scenario, such as developing standard language for Partners to use in their consultation requests, or a build-on in IPAC to help Partners determine compliance with the Agreement.

9. Public Involvement and Updates Included in the Final Agreement

The Service involved the public by making the draft Agreement and associated categorical exclusion available for review and comment. A Notice of Availability (NOA) for the draft Agreement and preliminary determination as a categorical exclusion under NEPA was published in the Federal Register on April 15th, 2019 (see Docket FWS-R3-ES-2019-0007).

Public comments on the Agreement and preliminary NEPA determination were requested by June 14th, 2019. We received 61 comments, 46 were supportive, 3 asked to reject the Agreement, 6 were from members of the Farm Bureau asking us to re-open the comment period, and 6 were neutral or irrelevant. Many of the comments provided suggestions or requests that warranted further clarification or consideration in the Agreement. After the comment period closed, the Service worked with the applicant to consider the relevant information and suggestions received during the comment period, and updated the Agreement accordingly. Several sections have been updated for clarification and to strengthen some of the key elements of the Agreement. Substantive changes and some specific comments are summarized below, and common questions that were submitted during the comment period will be answered through FAQs, training, and outreach efforts provided by the Program Administrator or the Service.

Three responses registered opposition to the proposed Agreements, but did not provide substantive comments that required changes to the draft Agreement, draft categorical exclusion, or other response. These responses voiced concern with the voluntary nature of CCAAs and questioned the likelihood of Partners complying with the Agreement. Other responses stated concern that it's too early to provide assurances to Partners when conservation measures are still being developed by other conservation partners.

We received six letters from representatives of the Farm Bureau (Illinois, Oklahoma, Kansas, Arizona, the American Farm Bureau Federation, James Lynch and K&L Gates who submitted a joint letter representing Arizona, Indiana, Illinois, Kansas, Kentucky, Maryland, Missouri, New Mexico, Oklahoma, Tennessee, and Texas Farm Bureaus) during the 60 day comment period. Letters asked the Service to extend the public comment period for an additional 90 days to allow representatives to work with the Service and applicants to discuss concerns regarding conservation measures applied on easement lands. Overall, the Farm Bureau requested the Agreement extend incidental take cover of monarch butterflies to adjacent agricultural landowners and noted the following points: (1) The Farm Bureau expressed concern that actions taken under the proposed CCAA could conflict with legal requirements set forth by the Partner's easements and leases, and it's unclear how CCAA Partners will coordinate with landowners when they are applying conservation measures on easement lands; (2) Letters also commented that creating habitat adjacent to agricultural lands may put agricultural partners at risk of harming monarchs and other at-risk pollinators due to the land management practices they may use

adjacent to rights-of-way; and (3) one comment also recommended looking at the effects of the CCAA actions on listed species that may occur on agricultural lands.

- The Service decided not to extend the comment period for an additional 90 days because this was not necessary in order to continue working with the Farm Bureau post-comment period on their concerns. Following the comment period, members of the Service, Department of the Interior, and partners of the Agreement met with Farm Bureau representatives on multiple occasions to discuss concerns posed during the comment period. Where possible, the applicant and Service worked to update the Agreement and Permit to resolve concerns.

Regarding the desire for agricultural landowners to be included in the Agreement, the Agreement is specific to rights-of-way, and the conservation practices and key threats to monarchs addressed in the Agreement are specific to the rights-of-way Partners. The key threats, conservation measures, and land management objectives are fundamentally different for agricultural lands, and although agricultural producers can take on actions to benefit monarchs and other insects, these actions would be outside the scope of the Agreement. However, other monarch conservation efforts underway focus on agriculture partners, including the Natural Resource Conservation Service (NRCS) efforts to provide regulatory predictability for some management practices. In addition, other entities are developing guidance to help agricultural partners implement conservation measures for monarchs. For example, the Monarch Joint Venture has published a resource summarizing best practices and available programs for agricultural partners on their website at: <https://monarchjointventure.org/i-am-a/agriculture>. We also added a permit condition that provides incidental take of monarch butterfly by landowners (or their designees) on lands within 100-feet of each edge of covered right-of-way lands immediately adjacent to adopted acres where Certificate of Inclusion holders are applying conservation measures provided that (1) appropriate monarch conservation measures identified in Table 6.3 of the Agreement are implemented and can be documented by landowners within the 100-foot buffer zone, and (2) the incidental take by the landowners (or their designees) results from the implementation of these conservation measures or from covered activities (including the landowner's general operations, maintenance and modernization, or vegetation management activities), and (3) the activity will not result in take of listed or proposed species other than monarch butterfly, will not destroy or adversely modify designated or proposed critical habitat, and will not affect historic properties.

- Regarding concerns about the legal requirements set forth by the Partner's easements and leases, the Agreement is clear that all conservation measures and covered activities must be conducted in accordance with existing permits, easements, and agreements that allow Partners to access and manage lands enrolled in the Agreement.
- Regarding concerns about coordination between Partners and landowners in the instances when Partners are enrolling easement or leased lands within the Agreement, Partners agree to obtain consent from landowners before taking any actions that are outside the scope of their existing easement agreement. When implementing conservation measures

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on easement or leased lands, the Partner must limit its conservation measures to only those activities allowed under its easement or lease or obtain additional consent from the underlying landowner. The applicant provided additional detail on coordination with landowners in Agreement section 6.3 “Implementing Conservation Measures on Easements”.

- Regarding concerns about potential impacts that adjacent agricultural practices may have on monarch habitat, if landowners believe their activities are reasonably certain to incidentally take a Federally listed species, the Service encourages those landowners to apply conservation measures where possible to avoid impacts. Landowners may also choose to pursue incidental take coverage through various avenues. Technical guidance to assist in avoidance or to obtain incidental take coverage is available from various sources, including but not limited to those mentioned above.
- Regarding the recommendation to look at the effects of CCAA actions on listed species that may occur on agricultural land, the Service has evaluated the impacts to listed species resulting from the action of issuing the Permit and signing the Agreement in their Section 7 biological and conference opinion, and concluded 1) the proposed action will result in a net benefit to the monarch, 2) the proposed action is not likely to jeopardize the monarch butterfly’s continued existence, 3) the proposed action is not likely to jeopardize the continued existence of any endangered or threatened species and will not destroy or adversely modify critical habitat.

The majority of letters were supportive. Of the 48 supportive comments received, 21 were wholly supportive and didn’t include actionable items to update the Agreement. Fourteen of the supportive comments were form letters that did not provide substantive comments that required changes to the draft Agreement, draft categorical exclusion, or other response. These comments asked that the Agreement include species listed as endangered or threatened under the ESA, urged the use of zone-specific best management practices for monarchs, and asked the Service to work with the Environmental Protection Agency to ban the use of insecticides such as glyphosate.

The remaining 12 positive comments also included new information, points of clarification, and suggestions that warranted action to update the Agreement. Substantial updates to the Agreement based on these comments are explained below.

Comments asked for clarification of the definition of “new construction”, which is not covered under the Agreement. Comments also indicated confusion about what construction activities would be considered maintenance and modernization that is covered under the Agreement.

- € The Applicant and Service initially defined the term ‘new construction’ to clarify which activities fall outside the scope of the Agreement and explicitly exclude new, potentially significant construction projects that may have potential impacts that haven’t been

anticipated. Specifically, the draft Agreement attempted to describe construction projects related to upgrading of existing infrastructure that would fall under covered activities (for example, where construction falls largely within the footprint of existing infrastructure, or developed rights-of-way that exist at the time the associated lands are enrolled into a CI). However, this definition has caused confusion and has left "covered activities" ambiguous.

- ∄ To clarify, the Service and Applicant removed the term ‘new construction’ and instead explicitly stated the type of construction covered under the Agreement is associated with maintenance and modernization of enrolled infrastructure (for example, road, power line, energy substation, bridges, building, etc. on enrolled lands) that occurs substantially within the footprint of existing infrastructure and/or the accompanying lands that are maintained to support operations of such infrastructure. For example, modernization could include construction of a rest stop within the rights-of-way of an existing road or the widening or addition of energy substations in existing transmission corridors that exist on enrolled lands. By contrast, modernization does not include the construction of new infrastructure (or activities associated with the construction of that new infrastructure) on newly acquired or previously undeveloped or unmaintained rights-of-way or parcels. Undeveloped land implies that the land has an absence of infrastructure. Once infrastructure is constructed independent of this Agreement, the ongoing operation, maintenance, modernization, and vegetation management activities may be covered activities.
- ∄ The Service and Applicant further clarified what activities are covered by the Agreement by developing a “covered activities checklist”. Agreement Section 5.4 “Covered Activities Checklist” lays out criteria that must be met for the incidental take of monarchs due to an activity to be considered covered. Partners aren’t required to fill out the checklist for their projects, but use it as reference during CI and project development and must be able to demonstrate that the criteria were met for the activity receiving incidental take cover.

Commenters asked to clarify the process used to prioritize CI applications during the enrollment period and suggested criteria to use in prioritization. One applicant recommended that the Program Administrator consider the expected conservation benefit of a CI applicant, when prioritizing application review and processing. The Applicant provided clarification on how applications for CIs will be prioritized in Section 4.5 of the Agreement “Prioritizing Applications”.

Commenters asked for clarification on the modification process for CIs, and how Partners could modify lands and activities enrolled in their CIs. The Service and Applicant clarified in the final Agreement that Partners can request modifications of their CIs, and the Program Administrator may approve these modifications after ensuring that modifications are within the sideboards

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established through the Agreement and Permit. Further clarifications distinguished modification of CIs, modification of the Agreement, and amendments to the Permit. These clarification were made in Agreement Section 9 “Duration of Agreement and Permit”.

One commenter asked for more description of the Agreement “Advisory Committee”. The Advisory Committee is a group of Partners the Program Administrator establishes and facilitates to assist with decision support and identify needs for guidance and recommendations during implementation of CIs. Although the Committee may help to inform the Administrator, the Program Administrator is the final decision maker and is required to uphold the conditions of the Permit and Agreement. Additional clarification of the Advisory Committee is provided in Agreement section 7.4 “Agreement Advisory Committee”.

Two commenters recommended a shorter permit duration, given the short-term extinction risks predicted and the uncertain effects of climate change.

- ∞ The application for the Permit requested a 50 year duration. However, the Service agrees that a shorter permit duration would provide more certainty that the Agreement could be updated to reflect long-term trends or new threats that could arise over the course of Agreement implementation. The Service is comfortable with issuing a permit for 25 years, which would allow us greater confidence in anticipating impacts to monarchs during the permit period (for example, indirect impacts of climate change) and would allow Agreement Partners nearly a career’s length of time to be enrolled in the agreement before renewing. Based on conversations with the Applicant, we expect Partner enrollment to decrease after 20 years, therefore issuing a 25 year permit would conservatively accommodate implementation needs. The Service worked with the Applicant to revise the Permit term to reflect 25 years from the date of Agreement authorization.

One commenter pointed out that Thogmartin et al. (2017) adoption rates were developed using scientific modeling that determined the likely area needed to support monarchs, while also assuming conservation actions achieved a regionally appropriate density of milkweed stems. The draft Agreement requires that Partners evaluate effectiveness monitoring plots (1,500 square feet) for the presence or absence of more than one milkweed plant..documenting presence of “more than one milkweed”. This extrapolates to 60 stems per acre, which is much lower than median 150 stem-per-acre stem density expected by Thogmartin et al. (2017). Comments raised concern that draft Agreement adoption rates don’t ensure Partners meet specific milkweed stem densities, and therefore a net conservation benefit could not be assumed.

- ∞ The Service worked with the Applicant to update Section 6.2 of the Agreement “Adoption Rates” to clarify how adoption rates were determined, and the required habitat conditions of adopted acres (demonstrated by milkweed stem density and blooming nectar plant cover).

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- € The 150 stem-per-acre median “biologically reasonable” milkweed stem density expected for rights-of-way in the Midwest was based on an expert elicitation conducted by Thogmartin et al. (2017, Supplement 3). The Agreement was updated to reflect this density as a minimum requirement for adopted acres, and specified stem densities for energy and transportation sectors.
- € Specifically, the Agreement was updated to explain that suitable monarch habitat required on adopted acres (for the purpose of this Agreement) is defined by the density of milkweed stems and the percent cover of blooming nectar plants. For Eastern and Midwestern states¹⁰ adopted acres must support a milkweed density of at least 150 stems/acre (150 stems/acre for energy sectors, and 156 stems/acre for transportation). Outside the Midwest and Eastern U.S. ecological factors, such as low precipitation and lack of rhizomatic milkweed species, may limit ability to establish high stem densities. In those areas, adopted acres must support at least 58 stems per acre. On adopted acres in Western and Southern states, suitable habitat may also be demonstrated by the presence of at least 10% cover of blooming nectar plants.
- € Adaptive management thresholds (Agreement Section 10, “Adaptive Management” Table 10-1) were updated to reflect the new minimum stem density requirements, and the Service worked with the Applicant to create thresholds specifically addressing the abundance of suitable monarch habitat provided by the Agreement as a whole. These program-level thresholds ensure the minimum required stem densities will be met throughout the Midwest and East, where the literature has documented milkweed as a limiting factor to monarch populations, and ensures a net conservation benefit for monarchs is maintained throughout enrolled lands.
- € The Service’s analysis of the net effect of the Agreement on monarch habitat, supports a finding that the issuance criterion of “net conservation benefit” is met, considering the updated target stem density of at least 150 stems per acre. A summary of this analysis is in Section 11 of the Agreement “Impacts of Take” and provided in full in the Service’s biological and conference opinion.

Several commenters voiced support for the monitoring strategy in the proposed Agreement, stating that proposed monitoring will document the biological effectiveness of the conservation measures while being at a level practical for partners to achieve. Several comments also voiced concern on the apparent lack of monitoring standardization. Comments stated that the ‘criteria needed to demonstrate success’ of adopted acres was unclear, and that it is unclear what ramifications would occur if a Partner didn’t meet those criteria.

- € The Service worked with the Applicant to update Section 9 of the Agreement “Monitoring Provisions”. Monitoring protocol was standardized and reflects the protocol used by the Monarch Joint Venture’s protocol for monitoring monarch habitat in

¹⁰ Midwest and Eastern US refers to CT, DE, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MO, NE, ND, NH, NJ, NY, OH, PA, RI, SD, VA, VT, WI, WV

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roadsides (Monarch Joint Venture 2019), and revised monitoring criteria necessary to determine whether adopted acres are meeting expected habitat criteria.

- € Agreement Section 10 “Adaptive Management ” was updated to include specific criteria to trigger management adjustments should adopted acres not support suitable monarch habitat as indicated by the results of effectiveness monitoring.

A couple commenters supported the monitoring approach of documenting the presence of blooming nectar plants and noted that even some non-native plants are used by monarchs for nectaring. One comment pointed out that not all nectar plants are known to support monarchs and recommended that the Agreement make clear that habitat should include plants that support monarchs.

- € Clarifications were made in the Agreement to ensure consistency when referring to cover of potentially flowering nectar plants on adopted acres. For the purposes of effectiveness monitoring in the Agreement, potentially flowering nectar plants include all flowering plants that can provide available nectar for monarchs at some point throughout the growing season, including primarily forbs that (at the time of monitoring) have already, are currently, or have not yet bloomed. Individuals who are conducting effectiveness monitoring must have the technical expertise to distinguish flowers that can provide nectar to monarchs.

One commenter recommended explaining the Service’s methods for determining the amount of incidental take of monarch butterflies expected from the implementation of this Agreement. The Service updated Section 11. “Expected Impacts of Take” to explain how impacts were analyzed and the expected conservation benefits of the Agreement.

One commenter voiced concern about non-Federal projects that would need to consult under the National Historic Preservation Act (NHPA) and emphasized that this would be a new process for partners who don’t typically consult with Federal Agencies. The Service noted concern and modified the Section 106, NHPA compliance protocol (Service’s guidelines protocol for complying with Section 106 of the NHPA are included as part of Appendix C (Supplemental Information)) to simplify the process for those who may be new to considering impacts to cultural sites. The updated protocol reads as a stepwise dichotomous key and also includes added clarity to make clear that the protocol only applies to covered activities and conservation measures on enrolled lands- if there's no likelihood of a project to take monarchs, then the Agreement doesn't apply and 106 review, for the purposes of the Agreement and Permit, isn't required.

Several commenters brought up recommendations pertaining specifically to the Western population of monarch butterflies. One commenter emphasized the need to define “documented overwinter sites” and recommended using the Xerces Society Western Monarch Overwintering

Site database. Another commenter recommended expanding the Agreement to include conservation measures within known overwintering sites, as well as including a changed circumstance specific to the Western population.

- In Section 6.4 “Specific Conservation Measures” the updated Agreement defines “known winter aggregation sites” as those documented by the Xerces database and the Service’s South Carolina Field Office. The updated Agreement includes specific conservation measures for the Western population of monarch butterflies and for enrolled lands within a half mile of known winter aggregation sites.
- In Section 13.2 “Changed and Unforeseen Circumstances”, a changed circumstance was added to reflect the population of Western monarchs, as documented by annual winter surveys.

10. Enhancement of Survival Permit Issuance Criteria- Analysis and Findings

As set forth in 50 CFR 17.22 (d)(2) and 50 CFR 17.32 (d)(2) for endangered and threatened species, respectively, the Service finds that the section 10(a)(1)(A) issuance criteria for a Candidate Conservation Agreement with Assurances permit are met and are detailed below.

10.1 The take will be incidental to an otherwise lawful activity and will be in accordance with the terms of the Agreement.

The Service finds that proposed take of monarch butterflies would be incidental to otherwise lawful activities. These activities would occur as a result of the implementation of the conservation measures and covered activities described in the Agreement and Partners’ CIs. If the monarch butterfly is listed, the incidental take authorization under this permit will become effective, and following intra-Service consultation, incidental take on Federal lands would be covered by a biological opinion. The current conference opinion may be adopted as the biological opinion if no significant new information is developed and no significant changes to the Federal action have been made that would alter the content of the conference opinion.

10.2 The implementation of the terms of the CCAA is reasonably expected to provide a net conservation benefit to the affected covered species by contributing to the conservation of the species included in the permit, and the CCAA otherwise complies with the Candidate Conservation Agreement with Assurances policy available from the Service.

The Service has concluded that the Agreement meets the CCAA standard as described above by providing a list of conservation measures that are expected to benefit monarch habitat by maintaining, enhancing, and restoring milkweed and blooming nectar plants across the enrolled acres. The adoption rate approach (explained above in Section 5.2 “Adoption Rate”) ensures that at least a specified amount of monarch habitat is provided annually and that the habitat is of a specified quality (as defined by density of milkweed or cover of blooming nectar plants). We

expect the Agreement and associated Permit will result in substantial gains in milkweed and blooming nectar plant abundance across enrolled lands and will also reduce the extent of monarch habitat where the species will be exposed to potentially adverse vegetation management. The Service has also determined that the Agreement contains and adequately addresses all of the required elements of a CCAA, as described in the Service's CCAA policy and regulations.

10.3 The probable direct and indirect effects of any authorized [take](#) will not appreciably reduce the likelihood of survival and recovery in the wild of any species.

The ESA's legislative history establishes the intent of Congress that this issuance criterion be identical to a regulatory finding of no jeopardy under Section 7(a)(2) (see 50 CFR 402.03). Therefore, the potential effects to candidate and listed species of issuance of this ESA section 10(a)(1)(A) permit were reviewed by the Service under section 7 of the ESA. In the Service's biological and conference opinion addressing this action, the Service concluded that issuance of the Permit will not jeopardize the continued existence of the monarch butterfly, any federally listed or proposed species, or adversely modify any federal listed or proposed critical habitats. A full explanation of this determination is found in Section 4 "Effects of the Action " of the Service's Biological and Conference Opinion and is summarized below.

10.3.1 Effects to Listed and Proposed Animal Species

The Agreement addresses incidental take of monarch butterflies from certain activities (for example, covered activities and conservation measures), which may affect animals that are listed as endangered or threatened under the ESA or that are proposed for such listing. Partners will be required to ensure implementation of these activities do not cause take of any listed or proposed species other than monarch butterflies. They will be excepted from this requirement only if the take is authorized under (1) a separate ESA section 10 permit or (2) an incidental take statement prepared pursuant to a separate section 7 consultation (one other than the consultation done on the Agreement and Permit). Under each scenario, the Service would have had to evaluate the effects of the take and concluded that it was not likely to jeopardize the continued existence of the relevant species.

We think that the preclusion from the proposed action of any activity that would result in unauthorized take of a species of listed or proposed wildlife is sufficient to ensure that it will not jeopardize any of these species. Precluding any activity likely to cause take would effectively prevent under the Agreement any significant environmental modification or degradation that would kill or injure even a single individual of a listed or proposed animal species. As stated above, if a Partner would engage in such an activity, they could not do so in pursuit of the Agreement or under the authority of the EOS permit.

10.3.2 Effects to Critical Habitat and Listed and Proposed Plants

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Covered activities and conservation measures addressed in the agreement may directly affect listed and proposed plant species that occur in the contiguous U.S. or produce stressors to which these species may be exposed. Likewise, these activities may affect critical habitat that has been designated for plant or animal species and critical habitat that has been proposed for such designation. We have included a process in the CI application and enrollment process to ensure these effects do not jeopardize any listed or proposed plant species or adversely modify any designated or proposed critical habitat of any plant or animal. During the CI application and enrollment process, applicants must provide a list of avoidance and minimization measures (AMMs) for listed and proposed plant species that are likely to be present on their enrolled lands and for any overlapping critical habitats, designated or proposed.

Upon receipt of the AMMs and before a certificate of inclusion is issued, the Service will review the AMMs to confirm that they are sufficient to ensure that activities implemented under the Agreement or the EOS permit would neither (1) jeopardize the continued existence of any listed or proposed plants or any experimental populations of plants nor (2) destroy or adversely modify any proposed or designated critical habitat of any plant or animal. The Service will document its finding before the Programmatic Administrator issues a certificate of inclusion.

This tiered review process will facilitate the avoidance and minimization of effects to listed and proposed plant species to ensure that activities implemented pursuant to the Agreement or as authorized by the EOS permit do not reduce their likelihood of survival and recovery.

10.3.3 Conclusion

As described above, we expect the Agreement to result in substantial gains in milkweed and blooming nectar plants, which will be a benefit to monarch butterflies as well as other insects. The biological and conference opinion documents the Service's determination that the activities conducted in compliance with the Agreement are not likely to jeopardize the continued existence of the covered species (monarchs) or any listed or proposed species, or result in the destruction or adverse modification of proposed or designated critical habitat for any listed species.

10.4 Implementation of the terms of the CCAA is consistent with applicable Federal, State, and Tribal laws and regulations.

The Service is not aware of any law or regulation that would prevent the implementation of the Agreement and CIs. The Agreement does not preclude the need for the Program Administrator and Partners to comply with any Federal, State, or Tribal laws, but solely serves as an instrument to comply with certain provisions of the ESA under which the Permit is being sought.

In Section 4.4 of the Agreement (Enrollment Process) it says "Organizations are 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 Service's guidelines

protocol for complying with Section 106 of the National Historic Preservation Act are included as part of Appendix C (Supplemental Information).”

The Permit and CIs will include a specific condition that requires the Partner to be in compliance with any applicable State, Federal, or tribal law or regulation. In addition, the covered activities checklist (Agreement Section 5.4 “Covered Activities Checklist”) provides a project-level reminder of this requirement. Failure to comply with this term and condition can result in suspension or revocation of the Permit and/or CI.

10.5 Implementation of the Agreement will not be in conflict with any ongoing conservation programs for species covered by the permit.

The Agreement encourages activities to promote conservation of monarch butterflies and does not conflict with any ongoing conservation programs for the species. Development of the Agreement was driven by collaborative relationships involving other conservation programs and efforts for monarch butterflies and pollinators and this is expected to continue throughout implementation.

The effort to develop the Agreement was conceptualized, in part, by the Rights-of-Ways as Habitat Working Group, facilitated by the University of Illinois at Chicago Energy Resources Center. The Working Group provides educational and networking opportunities, leverages knowledge and resources across sectors, and serves as a central point for coordination and information exchange on managed habitat in the transportation and energy sectors. The collaborative nature of the working group was carried forth in the development of the Agreement, as described below.

The Agreement is closely aligned with the broad monarch conservation strategy identified in “All Hands on Deck” (Thogmartin et al. 2017), which envisions contributions from multiple land use sectors. This paper inspired a number of conservation efforts, like the Mid-America Monarch Conservation Strategy. The Strategy was developed by the Midwest Association of Fish and Wildlife Agencies and is another similar effort that specifically recognizes the opportunity for conservation benefits within the rights-of-way sectors. The MAFWA was represented on the Agreement’s Advisory Team to provide technical assistance during development of the Agreement.

The development of the Agreement also depended on the technical support contributed by many conservation partners including the Xerces Society for Invertebrate Conservation, who serves as a steering committee member of the Rights-Of-Ways as Habitat Working Group, the Monarch Joint Venture, and the Monarch Butterfly Fund.

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Implementation of the Agreement will include ongoing collaboration and integration with conservation programs and partners. For example, the Program Administrator will work with conservation partners to compile and disseminate new information, such as updated best management practices and resources for Partners to aid in application of conservation measures. Examples include organizing and facilitating webinars with technical experts, as well as updating information in the Monarch Agreement Implementation Toolbox.

At a local level, Partners may work with regional technical experts to identify strategic places to prioritize conservation efforts or facilitate research to assist in Agreement implementation. For example, the Florida Department of Transportation is working closely with the University of Florida to better understand how conservation measures could be applied while discouraging milkweed growth in areas that would cause monarch populations to persist later in the year than they naturally would (which leads to mortality as temperatures drop). In the west, Partners are working with technical experts like the Xerces Society and the Service to ensure habitat is maintained around winter aggregation sites and that blooming nectar resources are maintained in critical areas.

Many monarch and pollinator conservation programs provide technical and financial assistance to land managers for habitat management and monitoring for monarch butterflies and other pollinators. There are many ways Partners and the Program Administrator may engage and support other monarch and pollinator conservation efforts throughout the implementation of the Agreement. The Service finds that the Agreement for monarch butterflies would not be in conflict in any ongoing conservation programs and would complement these other conservation efforts.

10.6 The applicant has shown capability for and commitment to implementing all of the terms of the Candidate Conservation Agreement.

The Service finds the Program Administrator (Applicant, The University of Illinois-Chicago, Energy Resources Center) has demonstrated capability for and commitment to implementing the Agreement. Regarding capability, the University of Illinois System is a body corporate and politic of the State of Illinois, and is a 501(c)(3) organization. As part of University, the Energy Resources Center (ERC), located within the College of Engineering, will serve as the lead department. The ERC is an interdisciplinary public service, research, and special projects organization that works to improve energy efficiency and the environment. Originally created to be a "fast response" team of experts, the ERC currently provides technical assistance, sophisticated modeling capabilities, educational outreach, and program implementation across the public and private sectors. The ERC is committed to providing the most comprehensive and up-to-date solutions to the energy and environmental problems affecting institutional, industrial, residential, and commercial sectors.

The ERC organizes the Rights-of-Way as Habitat Working Group (Working Group) that formed in 2015 as a forum for industry to collaborate and share ideas on habitat conservation on working landscapes, particularly within transportation and utility rights-of-way. Today, more than 200 transportation, energy, government, and non-profit organizations across the U.S. and Canada are engaged in the Working Group. The Working Group provides educational and networking opportunities, leverages knowledge and resources across sectors, and serves as a central point for coordination and information exchange on managed habitat in the transportation and energy sectors. The Working Group builds broad industry engagement in strategies that will benefit not only the monarch butterfly but also model conservation collaboration for other pollinator species of concern. The development of the Agreement is one such strategy that promotes voluntary conservation action among non-Federal landowners.

Regarding commitment, the Program Administrator will maintain positions for program administration to facilitate enrollment of Applicants into the Agreement and distribute information for conservation efforts through coordination with other state and Federal agency staff and outreach to Partners and landowners. The Program Administrator will also serve as the fiscal agent for the Agreement, including management of a non-wasting endowment to fund permit and program administration activities that will benefit the monarch through coordination of annual Partner reporting and collaboration that addresses habitat restoration, enhancement, and the removal of threats. The non-wasting endowment will be supported through administration and enrollment fees that Partners are required to provide throughout the term of their CIs. Fees will be adjusted as needed, to ensure adequate administrative support over the course of the Permit period.

In addition, compliance with the Agreement is a condition of the Permit and CIs. Signing the legally-binding Agreement by the Service and Program Administrator assures that the Agreement will be implemented and commits both parties to obligations under the Agreement and its associated permit terms and conditions. Failure to perform obligations under the Agreement may be grounds for suspension or revocation of the permit, or revocation of specific CIs.

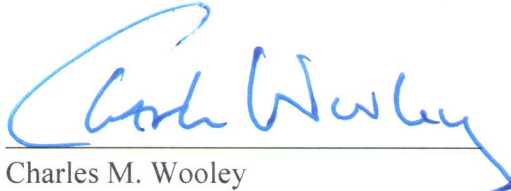
11. General Criteria and Disqualifying Factors- Analysis and Findings

The Service has no evidence that the permit should be denied on the basis of the criteria and conditions set forth in 50 CFR 13.21 (b)-(c). The Applicant has met the criteria for the issuance of the permit and there are no disqualifying factors that would prevent the permit from being issued under current regulations.

12. Recommendation on Permit Issuance

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Based on the foregoing findings with respect to the proposed action, issuance of a section 10(a)(1)(A) Enhancement of Survival permit to authorize the incidental taking of monarch butterflies (*Danaus plexippus*) by the Program Administrator, in accordance with the Agreement, and the biological and conference opinion is recommended.



Charles M. Wooley
Regional Director, Great Lakes Region
U.S. Fish & Wildlife Service

4.3.20

Date

13. Supporting Materials

- Final Agreement; “Nationwide Candidate Conservation Agreement for Monarch Butterfly on Energy and Transportation Lands”
- Draft 10(a)(1)(A) Enhancement of Survival Permit conditions
- Biological and Conference Opinion on the U.S. Fish and Wildlife Service’s approval of a Candidate Conservation Agreement with Assurances and Candidate Conservation Agreement and its issuance of an associated Section 10(a)(1)(A) Permit under the Endangered Species Act
- NEPA Environmental Action Statement for Categorical Exclusion
- Notice of Availability of Permit Application, and associated documents

14. Literature Cited

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