

Updates Included in the Final Monarch 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 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 began their Intra-service Section 7 consultation, and worked with the applicant to consider the relevant information and suggestions received during the comment period, and updated the Agreement accordingly. The Agreement was also updated to reflect new information resulting from the service's consultation, and feedback provided from Department and legal review. Several sections of the Agreement have been updated for clarification and to strengthen some of the key elements of the Agreement. Substantive changes are summarized below.

1. New Construction and Covered Activities

The Agreement was updated to clarify the use of the term "new construction", which is not covered under the Agreement. Additional updates were made to clarify what activities are considered "covered activities" (e.g., when incidental take is authorized).

- The Agreement 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 caused confusion and left "covered activities" ambiguous.
- To clarify, the final Agreement omits 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 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.

2. Prioritization of Applications

The UIC provided clarification on how applications for CIs will be prioritized in Section 4.5 of the Agreement “Prioritizing Applications”.

3. Modification and amendment process

The UIC and Service 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 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”.

4. Update to Advisory Committee

The UIC added additional information about the CCAA 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”.

5. Permit Duration

The application for the Permit requested a 50 year duration. However, after reviewing input from the public, the Service decided 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. After discussing with UIC, the Service ultimately issued a permit for 25 years, which allows for confidence in anticipating impacts to monarchs during the permit period (for example, indirect impacts of climate change) and is also a practical length of time for Partners to be enrolled before requiring a renewal of the Permit.

6. Adoption Rates and Net Conservation Benefit

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 biologically reasonable density of milkweed stems. The draft Agreement required 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 lower than median 150-156 of new milkweed stems restorable per-acre expected by Thogmartin et al. (2017) along transmission line and transportation rights-of-way, respectively. The Service concluded that the draft effectiveness monitoring threshold for milkweed would be too low to support a net conservation benefit in the East and the Midwest.

- The Service and UIC worked 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).
- The 150-156 stem-per-acre mean “biologically reasonable” milkweed stem densities expected for transmission line and transportation rights-of-way in the Midwest were based on Thogmartin et al. (2017, Supplement 3). The Agreement was updated to reflect these densities as minimum expectations for adopted acres within the two sectors.
- Specifically, the draft 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 states¹ 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 (at least two stems per

¹ 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

1,500 square-foot monitoring plot). 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.

7. Adaptive Management

Adaptive management thresholds (Agreement Section 10, “Adaptive Management” Table 10-1) were updated to reflect the new minimum stem density requirements (explained above, “6. Adoption Rates and Net Conservation Benefit”), 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 150-156 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.
- While updating the Agreement to include program-level thresholds based on milkweed stem densities, the Service realized the new threshold could be undermined by the CI-level thresholds (based on nectar plant cover and milkweed stem densities). The CI-level thresholds allowed adopted acres supporting at least 10% nectar plant cover, but no minimum density of milkweed stems, to be considered suitable habitat contributing to the overall conservation benefit of the Agreement. While supporting blooming nectar resources is beneficial for monarch butterflies, using nectar plant cover to count as an indication of successful adopted acres could ultimately put the Agreement in the position where CIs have met habitat goals (by using nectar plant cover), while monitoring indicates that milkweed stem densities are below levels that would indicate a net conservation benefit.
- To resolve this issue, the Agreement and the Service’s biological and conference opinion could either be amended to 1) include nectar plant targets based on existing and projected nectar plant densities on Partner lands to determine whether 10% cover of nectar plants would support a finding of a net conservation benefit, or 2) remove CI-level thresholds to allow the Program Administrator maximum flexibility, while maintaining the program-level thresholds. The Service ultimately chose to remove the CI-level adaptive management threshold for nectar for the East and the Midwest and to allow Partners and the Program Administrator the flexibility to apply unique adaptive management to individual CIs.

8. Monitoring and Reporting

The UIC and Service updated the monitoring and reporting section to ensure standardization, and to adequately inform adaptive management and whether or not the Agreement is meeting habitat goals.

- 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 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.

9. Potential Partner Overlap

The net conservation benefit approach to the agreement depends on the proportion of adopted acres being maintained as monarch habitat. If partners report the same acres as ‘adopted’ then monarch habitat could be double counted and the estimate of the net benefit of the Agreement could be overstated. The Service worked with UIC to add language to the final CCAA that encourages partners to work together to maximize the conservation benefit for monarchs, but specifies that where conservation measures overlap- Partners determine who would report a portion of the acres as their adopted acres in a given year. The UIC will track adopted acres and ensure potential overlap doesn’t result in double counting.

10. Flowering nectar plants

The UIC and Service made clarifications 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.

11. Expected Impacts of Take

The Service updated Section 11. “Expected Impacts of Take” to explain how impacts were analyzed and the expected conservation benefits of the Agreement. This section summarizes the analysis provided in the biological and conference opinion.

12. Protocol for National and State Historic Preservation Act (S106)

The Service formatted the protocol for compliance with NHPA/SHPO to simplify the text and added further clarification and explanations. 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.

13. Western Population of Monarch Butterflies

The Service worked with biologists in the West to further define “documented overwinter sites” and rely on the Xerces Society Western Monarch Overwintering Site database. The Service also included specific conservation measures adjacent to 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.

14. Clarifying the Service’s Conference Opinion and Biological Opinion in relation to the Agreement

The Service clarified how the Service’s Section 7 conference opinion on the Agreement may become a biological opinion if monarchs were to be Federally listed by adding the following explanation to the Agreement,

- 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 reinitiating of intra-Service consultation, incidental take on Federal lands would be covered by an incidental take statement provided with the biological opinion as long as the terms and conditions of the incidental take statement are implemented. 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 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 the Agreement, we refer to take on Federal lands as authorized through the incidental take statement of the biological opinion.

15. Special Terms and Conditions in the Incidental Take Permit

Coordination with Federal land management agencies: *[Note: This condition implements the term and condition that the Service included in the incidental take statement that it provided with the conference opinion that it completed for the CCAA/CCA. Partners must implement this condition if the monarch is listed as threatened or endangered and if their actions would result in prohibited take of the monarch on federal lands.]* At times, the Permittees will carry out activities that will affect monarchs on Federal lands. The relevant Federal land management agencies are likely to have their own objectives for monarch conservation on their lands and to be planning and implementing actions to conserve the species. In addition, they are likely to hold special expertise with regard to the status and trends of the species and its habitat in the areas where Permittees will propose to implement covered activities, conservation measures, or both. Therefore, Permittees shall coordinate with the relevant land management agencies to reduce negative effects to monarchs and to minimize the extent of incidental take. This coordination will also allow Permittees to ensure that Federal land management agencies are aware of their enrollment in the CCA and of the incidental take statement.

Notify and coordinate with Federal land management agencies

Before carrying out covered activities or conservation measures for the monarch on Federal lands in pursuit of the Agreement, holders of Certificates of Inclusion (Partners) shall provide the relevant Federal land management agency with an explanation of the proposed activities and their objectives. This notification shall include all activities that the Partner will carry out on lands under the jurisdiction of the land management agency that are included in their Certificate of Inclusion. This notification may be conducted programmatically for all activities undertaken by a Partner on Federal lands. As part of this notification, the Permittees shall request the agency's input on any aspect of the activities that could affect monarchs and that could avoid or minimize effects to the monarch or further enhance the benefits of proposed conservation measures.

This condition does not alter any existing notification requirements and timeframes already in place on the Permittee's easements or permits across Federal lands. It requires Partners only to notify relevant agencies, but does not require additional permissions or approvals beyond those already required under existing easements or permits from the agencies. For example, if a Partner has notified relevant agencies, but does not receive a response, this requirement is considered as fulfilled for the purposes of this term and condition.

To ensure that agency staff at the appropriate level are aware of activities that affect monarchs on the lands for which they have primary management responsibility, a Partner shall contact specific Federal land managers when acquiring special use permits, access permits, or other authorization notices. Notification is intended to be conducted at this local level, rather than contacting regional or national headquarters offices. The Program Administrator will provide assistance to the Partners if they are uncertain of the appropriate agency contacts.

16. Buffer Zone Activities –*Addressed in the Incidental Take Permit*

Lands within 100-feet of rights-of-way. 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 is authorized provided that (1) appropriate monarch conservation measures identified in Table 6.3 of the Agreement are implemented and can be documented by landowners (or their designees) 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. The validity of this take authorization is also conditioned upon strict observance of all applicable foreign, state, local, tribal, or other Federal law. Any enforcement action for failure of landowners (or their designees) to comply with the terms of this paragraph or for unauthorized take shall not be directed at or implicate the permit holder.

Severability. The paragraph above does not impose any duties or responsibilities on the Partners or Program Administrator not otherwise described in this Permit. The paragraph above is a freestanding agreement between adjacent landowners and the Service, arrived at as a result of a separate and discrete decision-making process and review. If the paragraph is determined by a court of competent jurisdiction to be to any extent illegal, otherwise invalid, or incapable of being enforced, paragraph shall be excluded from this Permit to the extent of such illegality, invalidity or unenforceability, and all other terms of the Permit here of shall remain in full force and effect. Any concern, contest, or question regarding the incidental take authorized on buffer lands within 100-feet of adopted acres on enrolled rights-of-way shall be directed to the Service.