



CONSERVATION ENHANCEMENT ACTIVITY

E420B

CONSERVATION STEWARDSHIP PROGRAM

Establish monarch butterfly habitat

Conservation Practice 420: Wildlife Habitat Planting

APPLICABLE LAND USE: Crop (Annual & Mixed); Crop (Perennial); Associated Ag Land; Farmstead

RESOURCE CONCERN: Animal

ENHANCEMENT LIFE SPAN: 5 years

Enhancement Description

Seed or plug milkweed (*Asclepias* spp.) and high-value monarch butterfly nectar plants to establish or improve monarch habitat. These areas may include, but are not limited to, field borders, vegetative barriers, contour buffer strips, shelterbelts, hedgerows, windbreaks, conservation cover, and riparian forest and herbaceous buffers.

Criteria

- Habitat areas must be at least 0.5 acres.
- A Wildlife Habitat Evaluation Guide (WHEG), must be used to show that 0.5 planning criteria has been met for the inadequate wildlife habitat resource concern. The WHEG used to meet this criterion does not need to be specific to monarch habitat. (If WHEG score is less than 0.5, consider E327B.)
- A WHEG specific to monarch habitat must be used to show that, post implementation, the Enhancement is expected to result in the establishment of suitable monarch habitat or will improve the habitat value of existing monarch habitat. The following may be used to meet this criterion:



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- [For circumstances where planning criteria for monarch habitat is currently below 0.5] Post implementation, planning criteria for monarch habitat is equal to or greater than 0.6.
 - OR
 - [For circumstances where planning criteria for monarch habitat is at 0.5 or greater] Post implementation, planning criteria for monarch habitat increases at least 0.1
- Establish and maintain habitat for monarch butterflies as described below:

A. Monarch butterflies

- Habitat will be established and/or maintained using lists of larval host plants and nectar plants suitable for monarch butterfly habitat as the guide. Lists are provided in the NRCS Field Office Technical Guide (FOTG).
- A grass component is commonly needed for ecological stability, weed control, and fuel for prescribed burning. The FOTG provides information on the grass/forb ratio for monarch habitat plantings.
- At least 60% of the forb seeds (pure live seed) in the planting mix will be from the monarch butterfly planting list (FOTG). This will ensure that plantings will provide food (nectar and pollen) for adult monarch butterflies. Milkweed seeds are included in meeting the 60% minimum because milkweeds are excellent nectar plants. The FOTG provides information on the required number of forb species per bloom period (early, mid, or late season) for monarch habitat plantings. Bloom periods are to coincide with monarch presence in the area.
- To provide food for monarch butterfly larvae, plantings will include at least one species of milkweed (*Asclepias* spp.) from the FOTG monarch butterfly planting list. All milkweed species used in the mix must be from this list and shall represent at least 1.5% of the total seeds in the mix. The total seeds include pure live seed from both grass and forbs. Tropical milkweed (*Asclepias curassavica*) shall not be planted.

Waiver: In some regions, a commercial source of native Asclepias species is limited or not available. In these situations, the NRCS State Conservationist may apply for a waiver, and only require that plantings



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include monarch nectaring species. In this situation, milkweed seed or plugs are still encouraged to be planted, if possible. If such a waiver is granted, the mix will result in at least 80% of the seed being from the state's monarch nectaring plant list.

- Any other use of the monarch butterfly habitat area must not compromise its intended purpose.

B. Planting criteria for monarch butterfly habitat

- Site selection should consider existing weed pressures and available methods of control. Delay planting and conduct an additional growing season of weed control if high weed pressure requires aggressive treatment.
 - Weed treatment and plant establishment will be accomplished according to the state's specifications for NRCS Conservation Practice Standard Wildlife Habitat Planting (Code 420) and other practice standards as appropriate.
 - Successful establishment is when:
 - a. The planting is providing at least 80 percent canopy cover, visually estimated;
 - b. Resultant cover consists of at least 500 milkweed plants per acre (approx. 1 stem per each 100-sq. ft.). A milkweed plant is defined as a single stem emerging from the ground; AND
 - c. two targeted nectar plants per bloom period are available when monarchs are present in the state.
 - Insecticides should not be used in the habitat planting area.
 - Herbicides are allowed prior to planting when it is necessary to eliminate competing weeds from a planting area in order for nectar and pollen producing plants to establish.
- C.** After a monarch habitat enhancement has been planted, herbicides may be spot-sprayed to remove broad-leaf weeds, or targeted application of grass-selective herbicides may be used in areas dominated by persistent weedy grasses. Similarly, the entire site may be mowed in the first year post-planting to reduce annual orbiennial



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weeds that persist (site should be mowed just before dominant annual weeds flower). Mowing height must not be too short so as to compromise the planting. A general guideline is 8 to 10 inches.

D. Operation and maintenance for monarch butterfly habitat

- Management and/or maintenance activities such as mowing, haying, burning, or grazing shall be conducted outside of the season when monarch larvae or adults are present.
- Insecticides should not be used in the habitat planting area.
- The planted habitat areas shall be regularly inspected for invasive and/or noxious plants or other plants that may compromise the purpose of this enhancement. Undesirable species shall be controlled using Individual Plant Treatment methods, for example, spot-spraying with herbicide or physical removal of individual plants.



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Documentation and Implementation Requirements

Participant will:

- Y Prior to implementation, provide a map showing the location of proposed habitat areas with notes on land use adjacent to proposed habitat areas to discuss with NRCS staff.
- Y During implementation, purchase specified seed mix or plant materials that meets monarch-specific seeding or planting requirements provided by NRCS.
- Y During implementation, follow habitat establishment guidance provided by NRCS in the state specifications for NRCS Conservation Practice Standard Wildlife Habitat Planting (Code 420).
- Y After implementation, provide a list of management and/or maintenance activities carried out to manage the habitat areas and the dates on which those activities occurred.
- Y After implementation, provide photo documentation of monarch habitat areas during blooming periods.

NRCS will:

- Y Prior to implementation, use WHEG to document 0.5 five planning criteria for the terrestrial habitat resource concern. The WHEG does not need to be a monarch WHEG.
- Y Prior to implementation, assess habitat condition using a monarch WHEG to calculate current WHEG score and anticipated WHEG score after implementation of Enhancement.
Benchmark WHEG score = _____ Planned Post Implementation WHEG score = _____
- Y Prior to implementation, provide participant with suitable larval host plants and nectar plants lists.
- Y Prior to implementation, provide and explain State specifications for NRCS Conservation Practice Standard Wildlife Habitat Planting (Code 420).
- Y Prior to implementation, provide participant with a recommended seed mix and planting specifications per above criteria (grass/forb ratio; number of forb species per bloom period for monarch habitat plantings).



Y After implementation, verify successful establishment (per planting criteria above).

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NRCS Documentation Review:

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

NRCS Technical Adequacy Signature

Date





WASHINGTON SUPPLEMENT TO CONSERVATION ENHANCEMENT

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Additional Criteria for Washington

- In addition to the criteria specified in the National job sheet E420B the following additional criteria apply in Washington (note that in WA monarchs only use habitat areas east of the Cascades Range):
 - Use *Biology Technical Note 14 Wildlife Habitat Evaluation Guide (WHEG)* to analyze the applicable land units; this will provide a general condition score for wildlife (including monarchs) habitat for your evaluation unit, showing whether the 0.5 planning criteria has been met.
 - Then, use *Biology Technical Note 29 Eastern Washington Monarch WHEG* (updated 2022; note that one will need the datasheet and the instructions document) to calculate both the benchmark and planned post-implementation scores for monarch butterfly habitat.
 - Both WHEGs (Biology Technical Notes 14 and 29) are located in the WA FOTG Section 1/Reference Lists/Technical Notes by discipline/Biology.
 - For larval host plants, utilize showy milkweed (*Asclepias speciosa*) and/or narrowleaf milkweed (*A. fascicularis*), the only native species in Washington. (CAUTION – milkweed is poisonous to livestock, though grazing animals do not normally consume it unless good forage is in short supply. Do not plant milkweed in high livestock use areas or where it could be mixed in with hay.)
 - For nectaring plants for adult monarchs, see Appendices A, B, & C of the *Biology Technical Note 29 Eastern Washington Monarch WHEG* (above) for suitable monarch nectar plants for eastern Washington.
 - Contact the NRCS State or Area Biologist for the monarch butterfly WHEG, or if you have questions about plant species selection or other aspects of applying the criteria in this supplement to the enhancement.



Additional Documentation Requirements for Washington

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- In addition to the documentation requirements specified in the National job sheet E420B the following additional documentation requirements apply in Washington:
 1. Use the current (March 2020) 420 WA IR form to document implementation of the practice; this IR is located in the WA FOTG Section 4/Conservation Practice Standards & Supporting Documents/Wildlife Habitat Planting (420).
 2. During implementation, provide for review by NRCS a copy of the seed mix or plant materials tag(s) meeting the larval or adult monarch butterfly habitat requirements.