



CONSERVATION ENHANCEMENT ACTIVITY

E512I

CONSERVATION STEWARDSHIP PROGRAM

Establish pollinator and/or beneficial insect and/or Monarch habitat

CONSERVATION PRACTICE: 512 - Pasture and Hay Planting

APPLICABLE LAND USE: Pasture; Associated Ag Land; Farmstead

RESOURCE CONCERN: Animals

ENHANCEMENT LIFE SPAN: 5 years

Enhancement Description

Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species that can provide nectar for Monarch butterflies and/or pollinators and forage and other habitat values for wildlife and livestock, particularly at times when targeted nectar, forage supply and quality, cover, and shelter are not available in other pastures.

Criteria

- This enhancement is acceptable for use when converting from degraded pastureland sites that require NRCS Conservation Practice Standard Pasture and Hay Planting (Code 512) in order to stabilize the site to address a resource concern.
- Select native, perennial, grass/forb/legume plant species and their cultivars based on climatic conditions, soil condition, landscape position and resistance to disease and insects, and will meet the nectar needs of specified, pollinating insects (and/or Monarch butterflies) at times when they will be present and foraging. These plants need to also provide forage or other habitat values for wildlife and livestock.
- Recommendations for planting rates, methods, depths, and dates from land grant/research institutions, plant materials program, extension agencies, or agency field trials will be followed.
- Seeding medium that does not restrict plant emergence will be provided, and planting will take place when soil moisture is adequate for germination and establishment.

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- Federal, state, or local noxious species will not be planted.
- Plant nutrients and/or soil amendments for establishment purposes will be applied according to a current soil test. Legume seed will be pre-inoculated or inoculated with the proper viable strain of Rhizobia immediately before planting.
- Plants will be selected that help meet nectar requirements for Monarch butterflies during times that the Monarch will be present. Plant selection will help to increase scores on the state's approved NRCS Monarch butterfly habitat evaluation.

Documentation and Implementation Requirements

Participant will:

- Prior to implementation, select a perennial forage species or grassland mixture for establishment. If livestock are included in the system, forage species selected will meet the desired level of nutrition for the kind and class of the livestock to be fed. (NRCS will provide technical assistance, as needed.)

Species	Forage category (grass, legume, forb)

- Prior to implementation, select planting technique, seeding rates and timing appropriate for the site and climatic conditions. (NRCS will provide technical assistance, as needed.)

Planting date	
Planting method	
Seeding rate	

- If livestock are included in the system, prior to implementation a grazing plan must be developed to keep grazing periods sufficiently short to allow for forages to recover before re- grazing occurs.



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- If livestock are included in the grazing system, during implementation in areas where animals congregate, establish persistent species that can tolerate close grazing and trampling.
- During implementation, keep the following documentation:
 - Records and photographs of planting preparation and any materials purchased or materials on hand used for the implementation of the enhancement.
 - Documentation of seed (Pure Live Seed) and any fertilizer or soil amendments used for the implementation of the enhancement.
 - If livestock are included in the grazing system, documentation, and photographs of turn in/turn out grazing records for each field.
- After implementation, make the forage planting and grazing records available for review by NRCS to verify implementation of the enhancement.

NRCS will:

Prior to implementation, complete the state's approved NRCS Wildlife Habitat Evaluation Guide (WHEG).

Target Pollinator Species: _____

WHEG score before implementation: _____

WHEG score after implementation: _____

Prior to implementation, provide and explain NRCS Conservation Practice Standard Pasture and Hay Planting (Code 512) as it relates to implementing this enhancement.

As needed, prior to implementation, NRCS will provide technical assistance:

- Planning site preparation and establishment specifications meeting NRCS Conservation Practice Standard Forage and Biomass Planting (Code 512).
- Prepare specifications for applying this enhancement for each site using approved specification sheets, job sheets, technical notes, and narrative statements in the conservation plan, or other acceptable documentation.
- If livestock are included in the system, develop a grazing plan to keep grazing periods sufficiently short to allow for forages to recover before re-grazing occurs.

During implementation, evaluate any planned changes to verify they meet the enhancement criteria.



- After implementation, verify the planned perennial grassland mixture was established to specifications developed for the site.

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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

*Sign and certify in the Oregon-Acknowledgment & Certification supplement below.



**OREGON SUPPLEMENT TO
CONSERVATION ENHANCEMENT**

**CONSERVATION
STEWARDSHIP
PROGRAM**

ACTIVITY E512I

Additional Criteria for Oregon

- In addition to the criteria specified in the National job sheet E512I the following additional criteria apply in Oregon:

Additional Documentation Requirements for Oregon

- In addition to the documentation requirements specified in the National job sheet E512I, the following additional documentation requirements apply in Oregon

[eFOTG: Section 3: Oregon Conservation Planning Documents: Wildlife Habitat Inventory Documents:](#)

- Use the Western Monarch Butterfly WHEG or the Oregon Pollinator WHEG to determine pre and post-enhancement condition. Direct any additional questions regarding this WHEG guidance to your basin or state wildlife biologist.
- Document in the practice specification how this enhancement will maintain or enhance the habitat for the Monarch butterflies, pollinators, or beneficial insects.

Oregon Supplemental Information: E512I

Planting Guidance:

Milkweeds are best established from rhizomes, plugs, or container plants. It is difficult to establish milkweeds from direct seeding. Please refer to information about milkweeds that occur in Oregon and which are suitable to the region of your project in "A Guide to the Native Milkweeds of Oregon" at: <https://www.xerces.org/publications/id-monitoring/guide-to-native-milkweeds-of-oregon>

Very little information is currently available that documents the use and importance of various flowers as nectar resources for adult Monarch butterflies across the Northwest region. The following tables show best estimates for good nectar plants for monarch habitat. Below you will find estimates on seeding rates and plant spacing when using bare-root, plugs or container plants. If planting small areas, highest success and shortened site preparation timing (although higher plant costs) will occur by planting plants (bare-root, plugs, container plants) over seeding areas. When establishing large plantings, seeding is the most economical way to establish habitat. If funds are available, planting higher rates of plants or seeds is advised.

All plant materials used to establish Monarch habitat should originate within the ecoregion where the project will occur (or from an adjacent ecoregion with harsher climate).

Please refer to the Xerces monarch Nectar plant guides for **general information** about recommended plants for:

The Maritime Northwest:



<https://xerces.org/publications/plant-lists/monarch-nectar-plants-maritime-northwest>

The Inland Northwest:



<https://xerces.org/publications/plant-lists/monarch-nectar-plants-inland-northwest>

Or the Great Basin:



<https://xerces.org/publications/plant-lists/monarch-nectar-plants-great-basin>

Planting and Seeding Recommendations:

Once adequate site preparation has been completed, planting or seeding can proceed.

In the Maritime Northwest, planting/seeding can occur any time in the fall to early spring timeframe, with best success with fall planting/seeding. In the Great Basin and Inland Northwest, planting should occur in late fall.

Below are specific recommendations (pages 6-12) for each of the Ecoregions of Oregon. When these recommended plant materials for monarch nectar plants cannot be located or are not appropriate for the site, substitutions from the publications “Plants for Pollinators in Oregon” or “Plants for Pollinators in the Inland Northwest” can be made. Those document links are here:

Plants for Pollinators in Oregon: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_041919.pdf

Plants for Pollinators in the Inland Northwest: https://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/wapmctn11733.pdf

Design Approvals & Acknowledgements:

Design Approval	Date	Job Approval Authority
Designed by:		
Approved by:		

Client's Acknowledgement Statement:

The client acknowledges:

- I have received a copy of the specification and understand the contents and requirements.
- It is my responsibility to obtain all necessary permits and/or rights and to comply with all ordinances and laws pertaining to the application of this practice.
- I will not begin installation of this practice until I have received appropriate approval to do so. I understand NRCS also has Federal and state laws to comply with that may take some time to address (e.g. cultural resources).

Client's Signature	Date

Certification Documentation:

	Field Evaluation: Post-treatment inventory, measurements, notes, as-built, and supporting documentation (document completion in conservation plan), as required.
	Map(s): Including field numbers, fields treated, and units treated (may document on conservation plan map), as required.
	Photos or other supporting documentation (e.g., seed tags, soil tests, receipts, invoices, spray records, fertilizer records, etc.)
Brief Description of Work Accomplished (types of equipment used, date of application, extents and quantities installed, etc.)	

Certification Statement:

The employee certifies the implementation of this conservation practice:

- Meets the purpose, general criteria, and any required additional criteria as documented in the conservation practice standard and/or enhancement sheet.
- Meets the specifications contained herein and is complete.
- Conforms to my existing Job Approval Authority controlling factors and levels.

Name	Date	Job Approval Authority

Field Level Certification – For multiple applications of this design.				
Land Unit/ Contract Item Number	Date	Unit(s)	Amount Installed	Certifier