



CONSERVATION ENHANCEMENT ACTIVITY

E511D_

CONSERVATION STEWARDSHIP PROGRAM

Forage harvest management to improve terrestrial habitat for wildlife and invertebrates during critical over-winter periods

Conservation Practice 511: FORAGE HARVEST MANAGEMENT

APPLICABLE LAND USE: Crop (Perennial) RESOURCE CONCERN

ADDRESSED: Animals

ENHANCEMENT LIFE SPAN: 1 year

Enhancement Description

Eliminate or forgo the last fall cutting of hay or haylage to optimize wildlife cover and shelter during critical over-winter periods and lengthen late season bloom period for invertebrates. Allowing late season stand maturity increases stand life and reduces risks of frost and winter damage while providing valuable wildlife habitat and extended bloom periods.

Criteria

- Specify the wildlife species of concern on the state-approved NRCS Wildlife Habitat Evaluation Guide (WHEG). The species of concern must be one that is present for at least part of their life cycle in the geographical/physiographic region and benefit from the late season, over-winter standing hay/haylage crop.
- The state's WHEG must specify cover and shelter or continuity habitat requirements for the wildlife species of concern. The total WHEG score after installation of this practice must be 0.5 or greater.
- Eliminate or forgo the last scheduled fall cutting to provide suitable over-winter habitat for desired wildlife species and pollinators.

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- Eliminate or forgo the last fall harvest to benefit the desired wildlife species by following state guidelines. {State Specify last date hay cutting may occur}
 - Example: Hay cutting in SD will occur no later than September 1 of the given year to allow adequate regrowth before winter dormancy.
- Prior cuttings to the foregone harvest must result in stubble heights that will promote health and vigor of the hayland species (refer to Conservation Practice Standard (CPS) 511). The last cutting of the season must ensure minimum plant heights required by the identified wildlife species. Regrowth and taller stubble heights will reduce winter-kill in cold climates (as applicable) and provide additional wildlife benefits. Refer to Cooperative Extension Service recommendations where available.



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Documentation and Implementation Requirements

Participant will:

- Y Prior to implementation, identify typical date of last fall cutting. Provide the forage harvest plan and cutting dates to NRCS for review to confirm it meets the criteria of the enhancement.
- Y Prior to implementation, design the last cutting heights to meet WHEG criteria.
- Y Bales from the last cutting prior to the foregone cutting must be removed from the field for off-field storage to minimize predator impacts.
- Y Prior to implementation, review the map delineating the fields selected for improving wildlife cover and shelter and enrolled in the enhancement.
- Y During implementation, take photographs of the forage stand to verify final cutting was left standing in the field and plant heights meet state wildlife requirements for the identified species. Overwintering stubble heights and regrowth must be maintained during the dormant period to promote wildlife habitat.
- Y During implementation, notify NRCS of any planned changes to verify they meet the enhancement criteria.
- Y During implementation, keep the following documentation for each field:

Field	Forage species	Overwinter height (inches)	Last Harvest Date



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Y After implementation, make documentation and photographs of forage cutting heights available for review to NRCS to verify implementation of the enhancement.

NRCS will:

Y As needed, provide technical assistance to meet the criteria of the enhancement.

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

Y Prior to implementation, an NRCS biologist or partner wildlife biologist will complete the state-approved NRCS WHEG. Specific species targeted will be notated on the WHEG, and total score after implementation must equal 0.50 or greater.

Wildlife Species of Concern	
Cover & Shelter Requirements	
Planned WHEG Score after implementation	

Y Prior to implementation, verify a map has been developed delineating the hayfields that will have the enhancement implemented.

Y Prior to implementation, NRCS will provide technical assistance, as needed to:

- o Develop a plan to harvest forage in a manner that protects stand longevity, while also maintaining or improving wildlife habitat. Plan must meet requirements of NRCS Conservation Practice Standard Forage Harvest Management (Code 511).



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- Develop specifications detailing the wildlife protection measures, such as selecting time periods to avoid forage harvest to protect wildlife and ensuring that suitable wildlife habitat exists during critical nesting periods.
- Υ During implementation, evaluate any planned changes to verify they meet the enhancement criteria.
- Υ After implementation, verify the planned forage harvest was completed to specifications developed for the fields delineated.
- Υ After implementation, review documentation and photographs of forage cutting heights to verify implementation of the enhancement.
- Υ If changes were made after implementation, complete the state's approved NRCS Wildlife Habitat Evaluation Guide (WHEG).

Wildlife Species of Concern	
Cover & Shelter Requirements	
WHEG Score after Implementation	

NRCS Documentation Review:

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

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Participant Name _____ Contract Number _____

Total Amount Applied _____ Fiscal Year Completed _____

NRCS Technical Adequacy Signature

Date





**WASHINGTON SUPPLEMENT TO
CONSERVATION ENHANCEMENT ACTIVITY**

**CONSERVATION
STEWARDSHIP
PROGRAM**

References for Forage Harvest Management (511) Enhancements

Critical nesting and fawning period in WA State is spring through July 15th each year.

Forage Harvest Management References:

Forage Harvest Management (511) Practice Standard and Specification Sheet can be found in the NRCS Field Office Technical Guide (FOTG) Section 4 – Practice Standards and Supporting Documentation/Forage Harvest Management (511) folder.

<https://efotg.sc.egov.usda.gov/#/state/WA>

Idaho Forage Handbook BUL 547 Third Edition

University of Idaho Extension, Moscow, Idaho. Information on hay and pasture management. [Idaho Forage Handbook BUL0547.pdf - Google Drive](#)

Pasture and Hayland Renovation for Western Washington and Oregon EB1870, Washington State University Extension.

<https://pubs.extension.wsu.edu/pasture-and-hayland-renovation-for-western-washington-and-oregon>

Pasture and Grazing Management in the Northwest PNW 614, A PNW Extension

Publication. Information on hay and pasture management. [Pasture and Grazing Management in the Northwest PNW0614.pdf - Google Drive](#)

Pasture Technical Note No. 105. **The Western Oregon and Washington Pasture Calendar**, A Pacific Northwest Extension Publication PNW 699. Oregon State University, University of Idaho, Washington State University.

<https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/pnw699.pdf>



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Wildlife References and WHEG's

For a **state species list** see WDFW **State Wildlife Action Plan**
<https://wdfw.wa.gov/species-habitats/at-risk/swap>

Washington State's Wildlife Habitat Evaluation Guide (WHEG) is **Biology Technical Note 14 Wildlife Habitat Evaluation Guide (WHEG)**. It can be found in the NRCS Field Office Technical Guide (FOTG) Section 1/References Lists/Technical Notes by Discipline/Biology folder. <https://efotg.sc.egov.usda.gov/#/state/WA/documents>

Use the Washington Department of Fish & Wildlife (WDFW) **Priority Habitats and Species (PHS) database** to identify priority wildlife and habitat in your area.
<http://wdfw.wa.gov/mapping/phs/>

For Washington State's **Sage Grouse Habitat Evaluation Guide (WHEG)**, and other species **WHEG's** – contact NRCS State Biologist for the current evaluation guide.

Harvest Recommendations to Produce Excellent Hay Quality

(Taken from Idaho Forage Handbook, Third Edition, BUL 547. University of Idaho. Glenn E. Shewmaker, Editor)

- Quality decreases as plants mature. Schedule harvests to cut at the desired level of plant maturity.
- Consider the daily cycling of forage quality when testing forage and scheduling daily harvest.
- Hay cut in the afternoon has higher quality than morning-cut hay
- Take advantage of good weather to speed drying and harvest when you can.
- Monitor the moisture content of the forage and perform each harvest operation at the optimal time based on moisture content.
- A higher stubble height will allow faster drying from better aeration but will also significantly reduce yield.
- Increasing windrow width in heavy hay from 48 to 60 inches allows for faster dry-down, however, in light hay an increased windrow width is not necessary.
- Swathers need to be in good repair and their settings adjusted for proper conditioning of forage.
- Condition the crop during swathing (scars plant epidermis for moisture escape).
- The "super conditioner" may provide faster dry-down of alfalfa hay in some conditions.
- Rake, roll, or ted the windrowed forage (increases air movement in windrow) as necessary.
- Raking or merging swaths into larger windrows has advantages when large harvest equipment is used, such as 1-ton balers. Larger windrows allow more efficient balling because (1) hay entering the full width of the baler pickup forms a more rectangular bale, (2) fewer passes are required by the baler on the field, and (3) balers can operate at slower ground speeds.