



## CONSERVATION ENHANCEMENT ACTIVITY

**E511137Z1- Colorado**

## CONSERVATION STEWARDSHIP PROGRAM

### Harvest of crops (hay or small grains) using conservation measures that allow desired species to flush or escape

#### Conservation Practice 511: Forage Harvest Management

**APPLICABLE LAND USE: Crop (Annual & Mixed); Crop (Perennial)**

**RESOURCE CONCERN ADDRESSED: Fish & Wildlife – Inadequate Habitat**

**ENHANCEMENT LIFE SPAN: 1 year**

#### Enhancement Description

Harvest of crops (hay or small grains) using conservation measures that allow desired species to flush or escape. **(For species list see State Wildlife Action Plan)**. Conservation measures include timing of harvest, idling land during the nesting or fawning period, and applying harvest techniques that reduce mortality to wildlife.

#### Criteria

- Forage will be harvested at a frequency and height that optimizes the desired forage stand, plant community, and stand life. Follow State Cooperative Extension Service (CES) recommendations for forage harvest based on stage of maturity, moisture content, length of cut, stubble height and harvest interval. The following criteria must be met:
  - Harvest forage at the stage of maturity that provides the desired quality and quantity without compromising plant vigor and stand longevity.
  - Harvest silage/haylage crops within the optimum moisture range for the type of storage method(s) or structure(s) being utilized. CES recommendations must be followed for optimum moisture content and levels as well as methods and techniques to monitor and/or determine moisture content and



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levels. Avoid fermentation and seepage losses of digestible dry matter from direct cut hay crop silage (moisture content >70%) by treatment with chemical preservatives or add dry feedstuffs. For optimal dry hay quality, rake hay at 30 to 40 percent moisture and ted or invert swaths when moisture is above 40 percent. To preserve forage quality and quantity, bale field cured hay at 15 – 20 percent moisture and bale force air-dried hay and 20 – 35 percent moisture.

- When harvested for ensilage forage will be chopped to a size appropriate for type of storage structure used and optimal effective fiber. The length of chop selected will allow adequate packing to produce the anaerobic conditions necessary to ensure the proper ensiling process. A shorter chop length on very dry silage may help to ensure good packing and adequate silage density.
- Cut forage plants at a height that will promote the vigor and health of the desired species. Cutting heights will provide adequate residual leaf area; adequate numbers of terminal, basal or auxiliary tillers or buds; insulation from extreme heat or cold; and/or unsevered stem bases that store food reserves needed for full, vigorous recovery. Follow CES recommendations for proper stubble heights to avoid winterkill of forage species in cold climates.
- Forage shall not contain contaminants that can cause illness or death to the animal being fed or rejection of the offered forage. Check CES contaminant notices, cautions, and recommendations for the specific harvest site location and area.
- To provide suitable habitat for desired wildlife species <For species list see State Wildlife Action Plan> appropriate harvest schedule(s), cover patterns, and minimum plant heights to provide suitable habitat for the desired specie(s) should be implemented and maintained.
- Time harvests to benefit the desired wildlife species by following state guidelines.
- Producer will apply and maintain at least two of the following management actions specifically for improving or protecting grassland functions for the state identified targeted wildlife species:



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- Do not cut hay on at least 1/3 of the hay acres each year. Idle strips or blocks must be at least 30 feet wide.
- For at least 1/3 of the hay acreage, hay cutting must be either before and/or after the primary nesting or fawning seasons based on state established dates for the targeted species.
- Increase forage heights after mowing to state specified minimum heights for the targeted species on all hayed acres.
- For all harvest activities that will be conducted during the nesting/fawning season the producer will implement at least two of the following to flush wildlife from during the harvest operation:
  - Attach a flush bar on the mower/harvest equipment.
  - Conduct all harvest/mowing during daylight hours.
  - The harvest pattern will either:
    - Begin on one end of the field and work back and forth across the field, or
    - Begin in the center of the field and work outward



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### Documentation and Implementation Requirements

Participant will:

- Prior to implementation, develop a map delineating the fields selected for improving wildlife habitat and enrolled in the enhancement.
- Prior to implementation, develop a plan to harvest forage in a manner that protects stand longevity, while also maintaining or improving wildlife habitat. Plan must meet NRCS Conservation Practice Standard Forage Harvest Management (CPS 511) and the criteria for this enhancement. Coordinate the plan with NRCS Conservation Practice Standard Upland Wildlife Habitat Management (645), as applicable. Plan must include at a minimum for the forage harvest operations:
  - Goals, objectives, specific purpose (improve wildlife habitat values)
  - At least two of the management actions specifically for improving or protecting grassland functions for the state identified targeted wildlife species
  - For all harvest activities that will be conducted during the nesting/fawning season the producer will implement at least two actions to flush wildlife from during the harvest operation
  - Forage species to be harvested
  - For each dominant forage species to be harvested provide:
    - Method of harvest
    - Harvest timing (stage of maturity, optimal harvest moisture content, length of cut)
    - Stubble height to be left
    - Harvest interval (including late harvest, if applicable)
    - Contaminant avoidance recommendations
- Prior to implementation, ensure forage harvesting tool/machinery is capable of cutting the forage at the height required to provide suitable habitat for the desired wildlife species, without compromising plant vigor and stand longevity.



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- Prior to implementation, review the State Wildlife Action Plan as it relates to implementing this enhancement and provide the following information:

<b>Wildlife Species of Concern</b>	
<b>Habitat Requirements, such as plant heights to provide suitable habitat</b>	

- During implementation, keep the following documentation for each field:

Field	Forage species harvested	Harvest height (inches)	Harvest Date

- During implementation, time harvests to benefit the desired wildlife species.
- During implementation, take photographs of forage cutting heights with fields and date of harvest identified.
- During implementation, notify NRCS of any planned changes to verify they meet the enhancement criteria.
- After implementation, make documentation and photographs of forage cutting heights available for review by NRCS to verify implementation of the enhancement.

NRCS will:

- As needed, provide technical assistance to meet the criteria of the enhancement.
- Prior to implementation, verify a map has been developed delineating the fields which will have the enhancement implemented.



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- Prior to implementation, provide and explain NRCS Conservation Practice Standards Forage Harvest Management (Code 511) and Upland Wildlife Habitat Management (Code 645) as they relate to implementing this enhancement, including applicable state specific job sheets.
- Prior to implementation, provide and explain the State Wildlife Action Plan as it relates to implementing this enhancement.
- Prior to implementation, NRCS will provide technical assistance, as needed to:
  - Develop a plan to harvest forage in a manner that protects stand longevity, while also maintaining or improving wildlife habitat.
  - Develop specifications detailing the wildlife protection measures and habitat improvement.
- During implementation, evaluate any planned changes to verify they meet the enhancement criteria.
- After implementation, review documentation and photographs of forage cutting heights to verify implementation of the enhancement.

**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

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