



E512L

CONSERVATION STEWARDSHIP PROGRAM

Diversifying forage base with interseeding forbs and legumes to increase pasture quality

Conservation Practice 512 (L): Pasture and Hay Planting

APPLICABLE LAND USE: Pasture, Associated Ag Land

RESOURCE CONCERN: Animals

ENHANCEMENT LIFE SPAN: 5 years

Enhancement Description

Establishing adapted and compatible species, varieties, or cultivars of perennial, herbaceous species that increases the diversity to enhance livestock, forage supply and quality, not available in other pastures.

Criteria

- Select perennial, forbs and legume plant species and their cultivars based on compatibility with established forage species, climatic conditions, soil condition, landscape position and resistance to disease and insects.
- Recommendations for planting rates, methods, depths, and dates from land grant universities (LGU), plant materials program, extension agencies, or agency field trials will be followed
- Prior to planting, graze or mow existing stands as needed to improve seedling competitiveness.
- Utilize seed and planting materials that will meet State quality standards. Inter-seeding method will not restrict plant emergence or leave the site vulnerable to erosion. Minimize soil disturbance during planting operation
- When planting legumes, use pre-inoculated seed, inoculum coated seed, or inoculate with the proper viable strain of rhizobia immediately before planting.



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- Select plants that will help meet livestock forage demand during times that normal forage production is not adequate.
- Use forage species that will meet the desired level of nutrition (quantity and quality) for the kind and class of livestock to be grazed or fed.
- Select species mixtures with similar palatability to avoid selective grazing.
- Select species with low or not toxic effects on grazing livestock. If two species for consideration provide similar forage quality, with one providing added benefit to wildlife and pollinator species, the wildlife beneficial species should be selected.
- In areas where animals congregate, consider establishing persistent species that can tolerate close grazing and trampling.
- Refer to NRCS Conservation Practice Standard (CPS) Nutrient Management (Code 590) for details for managing nutrients.
- 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.

Documentation and Implementation Requirements

Participant will:

- Prior to implementation, select a perennial forb and/or legume 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	Species type (grass, legume, broadleaf)

- 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	
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Planting Technique	
Seeding rates	

- *Prior to implementation when livestock are included in the system, modify the grazing plan that maintains grazing periods sufficiently short to allow for forages to recover before re-grazing occurs.*
- *Prior to implementation, a current (within 3 years of the proposed planting date) soil sample analysis is required when soil amendments will be added.*
- *During implementation, exclude livestock until the overseeded species are well established and have reached the full start grazing heights or recommended cutting heights before the first grazing or cutting begins. Refer to Conservation Practice Standards (CPS) 511 Forage Harvest Management and (CPS) 528 Prescribed Grazing for more information.*
- During implementation, keep the following documentation:
 - Records, seed tags and photographs of planting preparation and any materials purchased or materials on hand used for the implementation of the enhancement.
 - Documentation of seed rate basis (Pure Live Seed) and any fertilizer or soil amendments and rates used for the implementation of the enhancement.
- *During implementation where livestock are included in the grazing system, documentation and photographs of turn in/turn out grazing records for each field are required.*
- As needed, provide technical assistance to meet the criteria of the enhancement.
- Prior to implementation, provide and explain NRCS Conservation Practice Standard Pasture and Hay Planting (Code 512) and all supporting implementation requirements and specifications as it relates to implementing this enhancement.
- *Prior to implementation where livestock are included in the system, modify the grazing*

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plan to keep grazing periods sufficiently short to allow for forages to recover before re-grazing occurs and maintain sufficient height to protect from soil erosion.

- As needed, prior to implementation, NRCS will provide technical assistance:
 - Planning site preparation and establishment specifications meeting NRCS Conservation Practice Standard Pasture and Hay Planting (512).
- During implementation, evaluate any planned changes to verify they meet the enhancement criteria.
- After implementation, verify the planned perennial forbs/ legumes or mixture was established to specifications developed for the site.

NRCS Documentation Review:

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United States Department of Agriculture

I have reviewed all required participant documentation and have 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

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512 - Pasture and Hay Planting References:

Pasture and Hay Planting (512) Practice Standard and Implementation Requirements (IR's) are located in NRCS Field Office Technical Guide (FOTG) Section 4/Washington Conservation Practices/Pasture and Hay Planting (AC) (512) folder.

[FOTG Section 4](#)

Pasture and Hay (pasture) species, with seeding rates, for **Western Washington** can be found in the Extension Publication **EB1870, Pasture and Hayland Renovation** for Western Washington and Oregon. Also provides guidance on site preparation, seeding and when livestock grazing can resume.

<https://s3.wp.wsu.edu/uploads/sites/2079/2015/06/Pasture-and-Hayland-Renovation-for-Western-Washington-and-Oregon-WSU.pdf>

Ecological Site Descriptions and **Forage Suitability Groups** can be found in the **NRCS Field Office Technical Guide** [Washington | Field Office Technical Guide | NRCS - USDA](#) in Section 2. For planning unit ecological sites and forage suitability groups see next item.

Soil information, including productivity, **Ecological Sites and Forage Suitability Groups** for planning unit soils can be found by using the **Web Soil Survey**

<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>

Seedbed Preparation and Seed to Soil Contact, Plant Materials Technical Note 6, can be found in the NRCS Field Office Technical Guide (FOTG) in Section1/References Lists/Technical Notes by Discipline/Plant Materials.

[Washington | Field Office Technical Guide | NRCS - USDA](#)



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Appropriate plant species, and seeding rates for **Eastern Washington** dryland plantings can be found in the **Plant Materials Technical Note 1 Seeding Guide** in the NRCS Field Office Technical Guide in Section 1/Reference Lists/Technical Notes by Discipline/Plant Materials

[Washington | Field Office Technical Guide | NRCS - USDA](#)

In depth information on **pasture** species for the **Intermountain West** can be found in **Plant Materials Technical Note 19**, November 2009, Pasture – Species Selection and Grazing Management Guidelines. This document is found in the NRCS Field Office Technical Guide (FOTG) in Section 1/References Lists/Technical Notes by Discipline/Plant Materials.

[Washington | Field Office Technical Guide | NRCS - USDA](#)

In depth information on suitable **range and pasture species** can be found in **Plant Materials Technical Note 2**, March 2011, Grass, Grass-Like, Forb, Legume, and Woody Species for the **Intermountain West**. This document is found in the NRCS Field Office Technical Guide (FOTG) in Section 1/References Lists/Technical Notes by Discipline/Plant Materials. [Washington | Field Office Technical Guide | NRCS - USDA](#)

Pasture Condition Scoring documents in NRCS Field Office Technical Guide (FOTG) in Section 1/Reference Lists/Technical Notes by Discipline/Pasture folder

[Washington | Field Office Technical Guide | NRCS - USDA](#)

Wildlife References and WHEG:

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) in Section 1/References Lists/Technical Notes by Discipline/Biology folder. [Washington | Field Office Technical Guide | NRCS - USDA](#)

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/>

Consult Biology Technical Note 24, **Plants for Pollinators in the Inland Northwest, Revised 2016** for appropriate plant species east of the Cascade Mts. and for guidance on establishing pollinator habitat. FOTG Section 1/References Lists/Technical Notes by Discipline/Biology [Washington | Field Office Technical Guide | NRCS - USDA](#)



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For west side environments consult **Plant Materials
Technical Note 13, Plants for Pollinators in Oregon**

[Plants for Pollinators in Oregon](#)

Prescribed Grazing:

Available for use – **Prescribed Grazing (528) Design Worksheet/s**. This document has several useful worksheets for developing grazing plans. It can be found in the NRCS Field Office Technical Guide (FOTG) Section 4/Washington Conservation Practices/Prescribed Grazing 528) folder. [Washington - Field Office Technical Guide](#)

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>