

Animal Enhancement Activity – ANM 21 – Prairie restoration for grazing and wildlife habitat



Enhancement Description

This activity consists of restoring/renovating prairie habitat by establishing native vegetation and managing the restored plant community.

Land Use Applicability

Cropland, Pastureland, Rangeland

Benefits

Establishing and managing native prairie vegetation will provide food, cover, and nesting habitat for adapted species, especially grassland nesting birds.

Conditions Where Enhancement Applies

This enhancement applies to sites that have soils that indicate it was once a prairie or can sustain native prairie species.

NOTE: this enhancement can only be initiated in the 1st or 2nd year of the contract to ensure the activity has time to establish before the end of the contract.

Criteria

1. The resulting plant community will consist of at least 4 species of native perennial grasses and at least 4 species of native forbs adapted to the soils. In areas where seed availability and site adaptability is an issue, the NRCS State Office can modify the seeding combinations to meet local conditions.
2. Seeding must be done in a properly prepared seed bed as determined by the NRCS State Office.
3. Species appropriate fungal and microbial inoculants will be used during establishment where appropriate. Additional planting conditions may be specified if an ecological site description has been developed for the area.
4. During the establishment phase, weeds shall be controlled on the site.
5. After establishment:
 - a. The site will be protected from grazing and disturbance during the primary nesting and fawning season as defined by the NRCS State Office.
 - b. The site will be deferred from use for up to 3 years.
6. A grazing management plan will be developed and implemented.

Adoption Requirements

This enhancement is considered adopted when the applicant has successfully established the minimum number of native perennial grasses and forbs to the subject area.



United States Department of Agriculture
Natural Resources Conservation Service

2013 Ranking Period 1

Documentation Requirements

Following implementation of this activity, the participant must:

1. Document the list of the species planted,
2. Maintain the receipts for the seeds purchased,
3. Document the seeding dates,
4. Document the area (acres) restored by delineating the location of the restored prairie on a map or aerial photograph, and
5. Document the grazing management plan was implemented.

References

Fuhlendorf, S.D., H. Zhang, T.R. Tunnell, D.M. Engle and A.F. Cross. 2002. Effects of Grazing on Restorations of Southern Mixed Prairie Soils. *Restoration Ecology* Vol. 10, Issue 2: 401-407.

Packard, S. 1997. *The Tallgrass Restoration Handbook: For Prairies, Savannas, and Woodlands*. Island Press.

Schramm, P. 1990. *Prairie Restoration: A Twenty Five year Perspective on Establishment and Management*. Proceeding of the Twelfth North American Prairie Conference.

USDA-NRCS. 2010. *Conservation Practice Standard: Prescribed Grazing-Code 528*.

ANIMAL ENHANCEMENT ACTIVITY

ANM21– OR Prairie Restoration for Grazing and Wildlife Habitat

Oregon Criteria

Prairies are defined as extensive tracts of level or rolling land that was originally dominated by herbaceous plant communities (graminoids and forbs) and are typically free of woody plants (shrubs and trees). In Oregon, areas suitable for this enhancement will be less than 15% slope and have documented historical vegetative communities with less than 5% of the total annual production attributed to woody plants. A GIS layer has been created for field office use. This layer used the Historical Vegetation of Oregon, NRCS ecological site descriptions (ESD), and NRCS soil maps and ESD correlations to identify areas that are likely to be suitable for this enhancement. If areas are found that meet the guidelines above that are not included in this GIS layer, contact Bob Gillaspay, State Rangeland Management Specialist, for confirmation.

Species composition will be based on pure live seed in the specified mixture. The criteria and references listed here are to be used in Oregon and are in addition to those listed on the national activity sheet.

1. Proper grazing management is critical to maintenance of native seedings. The grazing management plan for areas seeded to native species will include:
 - A deferment from spring grazing (until after seed set) at least one year out of three years.
 - Minimum stubble heights will be 4-6 inches in all years.
 - No nitrogen fertilizer applications are allowed.
2. Adapted species, seeding rates, and seeding dates for use in Oregon are

- in tables at the end of this document. These seeding recommendations assume that the seedbed is clean, firm, and weed-free and that the seeding is performed with a drill. Drilled seed will be placed 1/8 – ¼ inch deep. Broadcast seedings will require twice as much seed. Species with small seeds (indicated by * in the tables) will be broadcast seeded. Seeding rates for these small seeded species reflect this seeding method (are already doubled).
3. All seeds should originate from the region in which the project will occur.
 4. Weeds will be spot treated. Mechanical weed treatment is preferred

to avoid detrimental impacts from chemicals on seeded perennial forbs or shrubs.

5. Eastern Oregon seed mixes assume that the site is less than 12% slope, moderately deep to deep soils with a loam or silt loam surface texture. Other site conditions such as shallow depth, swale or draw landscape position will require modified seed mixes. Contact Bob Gillaspay, State Rangeland Management Specialist for NRCS-OR for further guidance.

References

Oregon – Washington Guide for Conservation Seedings and Plantings, 2000, USDA-NRCS

Plant Fact Sheets and Guides - <http://plant-materials.nrcs.usda.gov/intranet/pfs.htm>

USDA NRCS. 2009. Ecological Site Descriptions for Oregon. <http://esis.sc.egov.usda.gov/Welcome/pgESDWelcome.aspx>

Native Seed Network 2009. <http://www.nativeseednetwork.org/index>

Historical Vegetation of Oregon 2002 [Historical Vegetation Maps for Pacific Northwest](#)

MLRA A2 – Willamette Valley

Drilled Seeding Mix		
for		
CSP Enhancement ANM21 – Prairie Restoration Seeding		
western Oregon – MLRA A2 – Upland Prairie		
	Species	PLS lbs/acre in Mix
	California oatgrass	2.40
	blue wildrye	1.50
	Roemer's fescue	1.20
	slender rush*	0.01
*	prairie Junegrass*	0.05
	Pine (Rough) bluegrass	0.10
	western yarrow*	0.40
	farewell to spring*	0.15
*	common woolly sunflower*	0.26
	American bird's-foot trefoil	0.50
*	common madia	0.30
	slender cinquefoil*	0.26
	lance selfheal	0.50
	rose checkermallow	0.25
	Idaho blue-eyed grass	0.20
	western Canada goldenrod*	0.04
Approximate cost: \$350 – \$450 per acre for seed		
Seeding Dates: September 1 – November 15 (when soil is dry enough to support equipment)		

Drilled Seeding Mix		
for		
CSP Enhancement ANM21 – Prairie Restoration Seeding		
western Oregon – MLRA A2 – Wet Prairie		
	Species	PLS lbs/acre in Mix
	spike bentgrass	0.50
	dense sedge	0.15
*	one-sided sedge	0.14
	California oatgrass	2.50
	tufted hairgrass	0.10
*	slender hairgrass	0.02
	meadow barley	0.20
*	slender rush	0.01
	Camas, common	0.30
	Downingia	0.10
	Dense-spike primrose	0.10
	common woolly sunflower	0.26
	Puget Sound gumweed	0.80
	clustered tarweed	0.15
	narrow-leaf miner's lettuce	0.30
	fragrant popcornflower	0.10
	slender cinquefoil	0.22
	lance selfheal	0.40
	straightbeak buttercup	0.20
	blue-eyed grass	0.30
	Hall's aster	0.06
Approximate cost: \$400 – \$500 per acre for seed		
Seeding Dates: September 1 – November 15 (when soil is dry enough to support equipment)		

MLRA B8 – Columbia Plateau

Drilled Seeding Mix		
for		
CSP Enhancement ANM21 – Prairie Restoration Seeding		
eastern Oregon – MLRA B8 – 10-12" PZ		
	Species	PLS lbs/acre in Mix
	Wheatgrass, Bluebunch (beardless)	5.5
	Fescue, Idaho	0.3
	Bluegrass, Sandberg	0.2
	Balsamroot, Arrowleaf	0.4
	Silky Lupine	1.75
	Parsnipflower Buckwheat	0.2
Approximate cost: \$300 – \$400 per acre for seed		
Seeding Dates: November 15 – December 15 (when soil is dry enough to support equipment and temperatures are cool enough (less than 40°F) for dormant seeding.		

Drilled Seeding Mix		
for		
CSP Enhancement ANM21 – Prairie Restoration Seeding		
eastern Oregon – MLRA B8 – 12-14" PZ		
	Species	PLS lbs/acre in Mix
	Wheatgrass, Bluebunch (beardless)	2.1
	Fescue, Idaho	3.0
*	Prairie Junegrass	0.4
	Bluegrass, Sandberg	0.2
	Balsamroot, Arrowleaf	0.2
	Milkvetch, Basalt	0.1
	Flax, Lewis	0.1
	Biscuitroot	0.2
*	Western Yarrow	0.1
Approximate cost: \$150 – \$250 per acre for seed		
Seeding Dates: November 15 – December 15 (when soil is dry enough to support equipment and temperatures are cool enough (less than 40°F) for dormant seeding.		

MLRA B9 – Palouse Prairie

Drilled Seeding Mix		
for		
CSP Enhancement ANM21 – Prairie Restoration Seeding		
eastern Oregon – MLRA B9 – 14-17" PZ		
	Species	PLS lbs/acre in Mix
	Wheatgrass, Bluebunch (beardless)	1.0
	Fescue, Idaho	4.5
*	Prairie Junegrass	0.1
	Bluegrass, Sandberg	0.1
	Silky Lupine	0.7
	Biscuitroot	0.2
*	Western Yarrow	0.25
Approximate cost: \$150 – \$250 per acre for seed		
Seeding Dates: November 15 – December 15 (when soil is dry enough to support equipment and temperatures are cool enough (less than 40°F) for dormant seeding.		

Drilled Seeding Mix		
for		
CSP Enhancement ANM21 – Prairie Restoration Seeding		
eastern Oregon – MLRA B9 – 17-22" PZ		
	Species	PLS lbs/acre in Mix
	Wheatgrass, Bluebunch (beardless)	1.0
	Fescue, Idaho	4.5
*	Prairie Junegrass	0.1
	Bluegrass, Sandberg	0.1
	Silky Lupine	0.7
	Parsnipflower Buckwheat	0.1
	Biscuitroot	0.1
*	Western Yarrow	0.1
Approximate cost: \$200 – \$300 per acre for seed		
Seeding Dates: November 15 – December 15 (when soil is dry enough to support equipment and temperatures are cool enough (less than 40°F) for dormant seeding.		