NRCS

Natural Resources Conservation Service

WASHINGTON

PLT16 – Intensive management of rotational grazing

CSP Enhancement Washington State Supplement

Land Use Applicability: Pastureland, Rangeland, Forestland

January 2014

Client/Operating Unit:		Tract Number:	
Farm/Ranch Location:		Farm Number:	
Specifications Date:		Field Number(s):	
Planned Installation Date:		Proposed Treatment Acres:	

Enhancement Description:

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This enhancement is for the harvest efficiency of grazing livestock to increase forage harvest, and to improve forage quality and livestock health. The grazing system is managed to produce high quality, nutritious forage and maintain plants with sufficient energy reserves to recover quickly when adequate soil moisture is available for regrowth. Generally, livestock are rotated through pastures in the grazing system based on their daily dry matter intake and nutritional requirements, and the physiological growth and nutritional stage of the forage plants. This enhancement is for rotational grazing systems with increased numbers of pastures or paddocks, the accompanying required infrastructure, shorter grazing periods, and increased stock density.

Benefits

The main benefits of Intensive Management of Rotational Grazing are efficient resource use with increased forage utilization, improved manure distribution, and nutrient cycling throughout the grazing acreage, and increased carbon sequestration resulting from greater forage harvest. Optimal environmental conditions are achieved by maintaining healthy, actively growing forage plants that protect the soil surface from erosion, thereby reducing risks to ground or surface water quality.

Conditions Where Enhancement Applies

This enhancement applies to all acres in the operation for the selected land use.

Criteria for intensive management of rotational grazing

A prescribed grazing plan is developed that increases harvest efficiency by utilizing a 75% increase in the number of pastures/paddocks per movement group (herd). See the attached “Supplement” for specifics on harvest efficiency.

Layout Sketch & Drawing (Provide sketch, drawings, maps, and/or aerial photographs.)

- Geo-referenced field map with all delineated treatment areas where CSP Enhancement PLT16 is to be applied.

Adoption Requirements

This enhancement is considered adopted when a prescribed grazing plan is complete, and implementation of the plan has begun, that incorporates a 75% increase in the number of pastures/paddocks, including the necessary infrastructure (fences/water/etc.)

Documentation Requirements

1. Copy of signed "National Supplement to Plant Enhancement Activity – PLT 16 – Intensive management of rotational grazing" certifying that a grazing plan has been implemented with a 75% increase in the number of paddocks/pastures for the herd (movement group) increasing the harvest efficiency resulting from greater stock density and reduced grazing time per pasture/paddock .

2. A map or aerial photo showing the pastures/paddocks making up the rotational grazing system. The layout of the pastures/paddocks both before implementation and after implementation shall be delineated on the map or photo.

References*:

Bertelsen, B.S., D.B. Faulkner, D. . Buskirk and J.W. Castree. 1993. Beef Cattle Performance and Forage Characteristics of Continuous, 6-paddock, and 11-paddock Grazing Systems. Journal of Animal Science 71:1381-1389

Jacobo, E.J., A.M. Rodríguez, N. Bartoloni and V.A. Deregibus. 2006. Rotational Grazing Effects on Rangeland Vegetation at a Farm Scale. Rangeland Ecology & Management 59(3): 249-257.

McKown, C.D., J.W. Walker, J.W. Stuth and R.K. Heitschmidt. 1991. Nutrient intake of Cattle on Rotational and Continuous Grazing Treatments. Journal of Range Management 44(6).

Rayburn, E.B. (editor). 2007. Forage Utilization for Pasture Based Livestock Production. NRAES – Book 173. PALS Publishing, Ithaca, New York.

Smart, A.J., J.D. Derner, J.R. Hendrickson, R.L. Gillen, B.H. Dunn, E.M. Mousel, P.S. Johnson, R.N. Gates, K.K. Sedivec, K.R. Harmoney, J.D. Volesky and K.C. Olson. 2010. Effects of Grazing Pressure on Efficiency of Grazing on North American Great Plains Rangelands. Rangeland Ecology and Management 63(4): 397-406.

Teague, W.R. and S.L. Dowhower. 2003. Patch Dynamics under Rotational and Continuous Grazing Management in Large, Heterogeneous Paddocks. Journal of Arid Ecology 55: 211-229.

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

Field Office Technical Guide:

eFOTG, http://www.nrcs.usda.gov/technical/efotg/

*** Some online documents may take several minutes to download.**

State Supplemental Information

States may need to develop training material on "harvest efficiency".

National Supplement to Plant Enhancement Activity – PLT 16 – Intensive management of rotational grazing

Producer:		**Date:**	
Tracts:		**County:**	

Increase harvest efficiency resulting from greater stock density and reduced grazing time per pasture/paddock

Change the current grazing system to allow for an increased number of pastures or paddocks, including the necessary infrastructure (fences/water/etc.), shorter grazing periods, and increased stock density. The grazing plan should document the planned length of grazing periods in pastures and length of time between grazing periods for an overall reduction in total grazing activity per pasture and an increased harvest efficiency resulting from greater stock density and reduced grazing time per pasture/paddock because of the 75% increase in the number of paddocks/pastures for the herd (movement group).

Criteria: Use the following formula for documentation, and attach a plan map showing the location of the grazing system design. The following example is provided.

EXAMPLE:

A. Current # of Pastures/Paddocks	6
B. Planned # of Pastures/Paddocks	11
C. % Increase= ((B/A)-1)100%	((11/6)-1)100 = ((1.83)-1)100 = (.83)100% = **83%**

Grazing Plan:

A. Current # of Pastures/Paddocks	
B. Planned # of Pastures/Paddocks	
C. % Increase= ((B/A)-1)100%	

Operation and Maintenance:

Operation: Livestock grazing plans should accommodate increased rest of grazing units, particularly during the active growing season of desirable rangeland and pasture species. Planned grazing use should not exceed 60% of annual production. Additional practices and inputs such as cross fences and water facility development may be required to facilitate adequate rest periods and increased harvest efficiency.

Maintenance: Grazing unit rotation of livestock should be accomplished annually, alternating the planned rotation sequence of grazing units each subsequent year, or specifically providing growing-season rest periods based on individual pasture condition.

1. Copy of signed "National Supplement to Plant Enhancement Activity – PLT 16 – Intensive management of rotational grazing" certifying that a grazing plan has been implemented with a 75% increase in the number of paddocks/pastures for the herd (movement group) increasing the harvest efficiency resulting from greater stock density and reduced grazing time per pasture/paddock .

2. A map or aerial photo showing the pastures/paddocks making up the rotational grazing system. The layout of the pastures/paddocks both before implementation and after implementation shall be delineated on the map or photo.

Client's Acknowledgement (To be signed before the Enhancement is applied.)

By signing below, I acknowledge that I:

- **have reviewed and understand the site specific design, installation specifications and operation/maintenance requirements in this State Supplemental Sheet and have an understanding of the purpose(s) of this Enhancement;**
- **will install, operate, and maintain this Enhancement in accordance with the National Sheet, the Washington State Supplemental Sheet and the site specific specifications.**
- **will make no changes to the planned design and installation without prior written approval of the Natural Resources Conservation Service.**
- **will obtain all necessary permits and/or rights, and comply with all ordinances and laws pertaining to the installation, operation, and maintenance of this Enhancement, prior to the start of installation; and**
- **will assume responsibility for notifying all Utilities affected by the installation, operation and maintenance of this Enhancement.**

Signature	**Date**

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