United States Department of Agriculture
Natural Resources Conservation Service

2011 Ranking Period 1

Water Quality Enhancement Activity – WQL23 – Protection of sensitive areas on winter grazing land

Enhancement Description
This enhancement is for the protection of riparian and other identified sensitive areas that are susceptible to degradation when used for wind protection by livestock.

Land Use Applicability
Pastureland and rangeland

Benefits
Properly placing a wind shelter (away from riparian and sensitive areas) protects livestock from the weather, while protecting water resources from degradation that results when livestock concentrate in an area. Alternative wind shelters minimize adverse impacts around riparian areas that offer natural protection by reducing the potential to concentrate nutrients around water sources, and reducing bank disturbance, soil compaction and excessive trampling of riparian or sensitive area vegetation. The proper placement of these alternative shelters results in improvements to water quality and animal health.

Criteria

1. Producers are required to use one type of alternative shelter to provide livestock with protection from wind
2. Alternative shelter design criteria and placement must follow state Land Grant University guidelines or NRCS design criteria
3. Fabricated shelter designs will meet the need of the entire herd
4. Supplemental feeding or mineral supplements will not be permitted within ¼ mile (1,320 ft) of riparian areas, water courses or water bodies

Documentation Requirements

1. A map showing the planned location(s) of fabricated shelter(s) in each pasture
2. An approved fabricated shelter design
3. Photographs showing shelters in the field

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IDAHO ADDENDUM 2011
Water Quality Enhancement Activity – WQL23
Protection of Sensitive Areas on Winter Grazing Land

Additional guidance for protection of sensitive areas:

Sensitive areas to protect include areas adjacent to any water courses or water bodies, or riparian or wetland sites.

Fabricated wind breaks will be located away from sensitive areas and will provide adequate protection to the herd. Shelters will be fabricated to address (and withstand) site-specific climate and soil conditions as well as livestock impacts. This enhancement does NOT include the construction of sheds as a wind break unless approved by the State Range Conservationist.

Shelters should be located on the windward side of the area to be protected and oriented as close to perpendicular to the prevailing winds as possible.

Fence shelters designed for both wind and drifting snow should be constructed in a semicircle or 90 degree V shape with a solid face to divert drifting snow around the ends of the barrier. Straight solid (non porous) fence shelters are not suited for areas with drifting snow unless upwind snow trapping measures are installed i.e., shelterbelts, snow fences, etc. The shelter length should be 10 - 15 times the shelter height for straight shelters. The length of each wing of a V shelter should be 7 - 10 times the shelter height. The wind speed will typically be reduced 60-80% in the protected area behind the shelter. Straight line porous fence shelters shall be mounted approximately 12 inches above the ground or ground cover height to reduce eddy currents (whirlwinds) and allow the wind to move snow downwind of the protected area, where used for snow protection. Porous shelters must have approximately 80% solid and 20% open surface. The V or closed end should point in the direction of the winter and early spring prevailing winds. Fabricated shelters must be inspected periodically and any damaged portions should be repaired to maintain the proper function of the structure.

For additional information on fabricated wind breaks for livestock, refer to the following:

Purdue University Cooperative Extension, 1983. *Wind and snow control around the farm*. NRC-191, West Lafeyette, IN.
http://www.ces.purdue.edu/extmedia/NCR/NCR-191.html

USDA Forest Service, Rocky Mountain Research Center, *Wind protection to shelter livestock.*
http://www.wrds.uwyo.edu/wrds/rmfres/windprot/

This activity may NOT be used with the following enhancements:
ANM23

Potential duplicate practices:
528 – Prescribed grazing