Water Quality Enhancement Activity – WQL28 – Biological suppression and other non-chemical techniques to manage brush, herbaceous weeds and invasive species

Enhancement Description

This enhancement is for the reduction of woody brush, herbaceous weeds and invasive plants using non-chemical methods. Physical methods include burning, hoeing, mowing, mulching, pulling or other similar techniques. Biological methods include targeted livestock grazing, the use of natural enemies either introduced or augmented and planting desired species after weed/brush control measures. The addition of mineral amendments to favor desired plant species is recommended. Use of chemicals is prohibited with this enhancement.

Land Use Applicability

Pastureland, Rangeland, Forestland

Benefits

Environmental benefits will be site specific. Benefits may include but are not limited to improved water quality achieved through eliminating the use of synthetic herbicides resulting in no chemicals in surface runoff or leaching into the soil profile. Air quality will see similar impacts by eliminating chemical drift and volatilization. Controlling invasive species, brush and weeds will allow native plant communities to return and improve wildlife habitat.

Conditions Where Enhancement Applies

This enhancement applies to all pasture, range or forest land use acres.

Criteria

1. Develop a plan for managing invasive plants, brush and/or weeds that includes:
   a. Assessment of existing conditions and potential risks posed by the target vegetation,
   b. Strategies for control,
   c. Control methods selected,
   d. Monitoring and evaluation process, and
   e. Operation and maintenance follow up activities.
2. Implementation of this enhancement requires the use of biological, physical, and/or other non-chemical weed suppression techniques instead of herbicides. These techniques, used individually or in combination, can include activities such as:
   a. Grazing animals (primarily through the use of goats or multispecies grazing) to target undesirable vegetation.
   b. Introduction of beneficial insects to attack undesirable vegetation.
   c. Introduction of beneficial micro-organisms to attack undesirable vegetation.

   d. Prescribed burning, if appropriate for local conditions and target vegetation. Prescribed burning must comply with criteria of Conservation Practice Standard 338-Prescribed Burning.
   e. Hand removal or cultivation.
   f. Mowing or cutting.
   g. Use of heavy equipment in areas with well established, dense brush cover.
   h. Planting of desired species after implementation of approved technique to provide competition and limit regrowth of unwanted vegetation.
   i. Application of lime, compost, manure, or other natural soil amendments, based on soil test results, to give grasses, native plants, or other desired species a competitive edge over undesirable vegetation.
3. Biological suppression techniques should be based on techniques recommended by the local Land Grant University.
4. Biological suppression must be preceded by an analysis to ensure the proposed biological agent is compatible with the agronomic, ecological and social objectives of the operation and ecosystem.
5. Operation and maintenance activities must be followed to ensure regrowth or resprouting is controlled. Additional treatment of individual plants or areas needing retreatment should be completed as required to effectively controlling the targeted species.

Note: Amending poor or unproductive land based per soil test results and recommendations will allow desirable grass species to obtain a competitive advantage over undesired species.

Adoption Requirements
This enhancement is considered adopted when invasives are being managed via biological, physical, and/or other non-chemical techniques described above and no pesticides were used.

Documentation Requirements
Written documentation for each treatment area and year of this enhancement including:
1. A full description of all biological, physical, and/or other non-chemical suppression techniques utilized including:
   a. Method (s) of control used
   b. Area(s) on farm where control methods were applied
   c. Number and species of grazing animals utilized, and/or number and species of introduced insect colonies distributed and the planned time frame of the treatment.
   d. Photograph(s) of treatment(s) applied
2. A map showing where the activities were applied including treatment acreage

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