



Producer:

Location:

Farm Name:

Project or

Contract:

County:

Tract Number:

**Practice Lifespan – 10 years**



**Practice Purpose(s):** (check all that apply)

Reduce erosion from wind and water and reduce excessive sediment to surface waters (soil erosion).

Reduce sedimentation offsite and protect water quality and nutrients in surface and ground waters (water quality degradation).

Provide food and cover for wildlife and pollinators or other beneficial organisms (inadequate habitat for fish and wildlife).

Reduce greenhouse gases and increase carbon storage (air quality impact).

Reduce emissions of particulate matter (air quality impact).

Other: (Specify)

**Description of work:**

**NRCS Review Only**

Designed By:

Date

Checked By:

Date

Approved By:

Date

## **386 – Field Border Implementation Requirements**

### **General Criteria Applicable to All Purposes:**

Establish field borders at field edges to the extent needed to meet the resource needs and producer objectives. Minimum field border widths shall be based on local design criteria specific to the purpose or purposes for installing the practice. The minimum field border width shall be 10 feet.

Establish field borders to adapted species of permanent grass, forbs and/or shrubs that accomplish the design objective.

Plants selected for field borders will have the physical characteristics necessary to control wind and water erosion to tolerable levels on the field border area. For portions of the border that will be subject to equipment traffic, establish species tolerant to equipment such traffic.

Seedbed preparation, seeding rates, seeding dates, seeding depths, fertility requirements, and planting methods will be consistent with approved local criteria and site conditions. Refer to VT 512 Forage and Biomass Planting Specification for methods.

Ephemeral gullies and rills present in the planned border area will be eliminated as part of seedbed preparation. If present, ephemeral gullies and rills located immediately upslope from the planned border area need to be treated to ensure more sheet flow and less concentrated flow enters the field border area.

Break up or redirect concentrated water flow within the field borders to prevent gully erosion.

### **Additional Criteria to Reduce Erosion from Wind and Water and Reduce Excessive Sediment to Surface Waters:**

Check if Applicable

Field border establishment will be timed so that the soil will be adequately protected during the critical erosion period(s).

Establish permanent species that create a dense cover.

Establish stiff-stemmed, upright grasses, grass/legumes or forbs to trap wind or waterborne soil particles.

The amount of surface and/or canopy cover needed from the field border shall be determined using current approved water and wind erosion prediction technology. Soil erosion estimates shall account for the effects of other practices in the management system.

#### **Wind Erosion Reduction.**

Check if Applicable

Locate borders to provide a stable area on the windward edge of the field as determined by prevailing wind direction data during the critical erosion period(s).

Minimum height of grass or forbs shall be one foot during the critical wind erosion period.

#### **Water Erosion Reduction.**

Check if Applicable

Locate borders to eliminate sloping end rows, headlands, and other areas where concentrated water flows will enter or exit the field.

Orient plant rows as closely as possible to be perpendicular to sheet flow direction.

### **Additional Criteria to Reduce Sedimentation Offsite and Protect Water Quality and Excess Nutrients in Surface and Ground Waters**

Check if Applicable

Do not burn the field border.

As a minimum, locate field borders along the edge(s) of the field where runoff enters or leaves the field. The minimum width for this purpose shall be 30 feet and have a dense vegetative stand (similar to a dense sod).

Design border widths to comply with all applicable State and local regulations regarding manure and chemical application setbacks.

Establish stiff-stemmed, upright grasses, grass/legumes or forbs to trap wind or waterborne soil particles.

## **386 – Field Border Implementation Requirements**

### **Additional Criteria to Provide Wildlife Food and Cover and Pollinator or Other Beneficial Organisms**

Check if Applicable

Use an approved habitat evaluation procedure to determine the appropriate amount, arrangement and composition of habitat resources needed to provide adequate food and cover for target wildlife species.

Select species that provide adequate habitat, food source and/or cover for the wildlife species of interest.

The minimum width for this purpose shall be 30 feet.

Schedule mowing, harvest, weed control, and other management activities within the field border to accommodate reproduction and other life-cycle requirements of target wildlife species.

When possible, disturb no more than 1/3 of the field border at any given time. Avoid vehicle traffic in the field border area.

For beneficial organisms (e.g., predatory and parasitic insects, spiders, insectivorous birds and bats, raptors, and terrestrial rodent predators) that prey on target pests, select diverse plant species that meet dietary, nesting and cover requirements for the intended species, at least during the critical period for control of target pests, and ideally year-round. Avoid exposure of the field border to pesticides and other chemicals that are potentially harmful to wildlife, pollinators, and other beneficial organisms.

When wildlife and/or pollinators are a concern, a lower percent groundcover than would be needed if protecting soil and water quality is acceptable as long as the soil resource concern is also adequately addressed (i.e., no excessive soil loss). This may be achieved by simply increasing the field border width.

### **Additional Criteria to Reduce Greenhouse Gases and Increase Carbon Storage**

Check if Applicable

Establish plant species that will produce adequate above- and below-ground biomass for the site (i.e., a positive soil conditioning index will be achieved).

Maximize the width and length of the field border to fit the site and increase total biomass production.

Do not burn the field border.

Do not disturb the roots of the established vegetation with tillage.

### **Additional Criteria to Reduce Emissions of Particulate Matter**

Check if Applicable

Establish plant species with morphological characteristics that optimize interception and adhesion of airborne particulates. Select plants with persistent roots and residue that stabilize soil aggregates and mitigate the generation of airborne particulates.

Do not burn the field border.

Establish species resistant to damage from equipment traffic.

### **Operation and Maintenance:**

- Field borders require careful management and maintenance for performance and longevity. The following O&M activities will be planned and applied as needed:
- Repair storm damage.
- Remove sediment from above, within, and along the leading edge of the field border when accumulated sediment either alters the function of the field border or threatens the degradation of the planted species.

## 386 – Field Border Implementation Requirements

- Shut off pesticide sprayers and raise tillage equipment to avoid damage to field borders.
- Shape and reseed border areas damaged by animals, chemicals, tillage, or equipment traffic.
- Do not use the field border as a hay yard or machinery parking lot for any extended period of time, especially if doing so will damage or impair the function of the field border.
- Maintain desired vegetative communities and plant vigor by liming, fertilizing, mowing, disking, or burning and controlling noxious and invasive weeds to sustain effectiveness of the border.
- Repair and reseed ephemeral gullies and rills that develop in the border.
- Minimally invasive vertical tillage (e.g., paraplowing) may be performed in rare cases where compaction and vehicle traffic have degraded the field border function. The purpose of the tillage is strictly to relieve soil compaction and increase infiltration rates so as to provide a better media for reestablishment of vegetation and field border function.
- When managing for wildlife, maintenance activities that result in disturbance of vegetation should not be conducted during the primary nesting, fawning and calving seasons. In addition, when managing for wildlife, pollinator, and beneficial habitat, conduct any pesticide spray operations in the production area in a manner that prevents exposure of the field border to the pesticides, taking into account toxicity of the materials used to non-pest organisms, and weather conditions. Activities should be timed to allow for regrowth before the growing season ends whenever possible. The optimal vegetative successional state shall be maintained to accommodate target wildlife species' requirements.
- Periodic removal of some products such as medicinal herbs, nuts, and fruits is permitted provided the conservation purpose is not compromised by the loss of vegetation or harvesting disturbance.
- Avoid vehicle traffic when soil moisture conditions are saturated.
- Maintain records of the field border maintenance as needed by the land user.

### Specific Additional Operation and Maintenance Requirements For Your Practice:

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A map(s) showing all sites/areas planned for Field Border is attached.

Establish Field Border according to the Specifications provided below.

If you have questions about this planned **Field Border** practice contact:

Name:		Tel:		Email:	
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## 386 – Field Border Implementation Requirements

### Field Border Specifications:

(PLS = Pure Live Seed)

Planned Field Border Layout	Field Border 1			Field Border 2			Field Border 3			Field Border 4		
Field Number or Name:												
Border Width (Feet):												
Total Length (Linear Feet)												
Planned Area (Acres)												
Seed or Shrub: Species #1												
PLS—lbs or Shrubs/acre / Total Pounds/Shrubs												
Seed or Shrub: Species #2												
PLS—lbs or Shrubs/acre / Total Pounds/Shrubs												
Seed or Shrub: Species #3												
PLS—lbs or Shrubs/acre / Total Pounds/Shrubs												
Seed or Shrub: Species #4												
PLS—lbs or Shrubs/acre / Total Pounds/Shrubs												
Lime (tons/acre) / Total Tons												
Fertilizer (lbs/acre)	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
Fertilizer (Total lbs)												

#### Site Preparation

*Prepare a firm seedbed. Ephemeral gullies and rills present in the planned border area will be smoothed. Apply lime and fertilizer as indicated by soil testing. Additional requirements:*

#### Planting Method

*Drill grass and legume seed \_\_\_\_\_ inches deep uniformly over area. Establish vegetation according to the specified seeding rate. If necessary, mulch the newly seeded area with \_\_\_\_\_ tons per acre of mulch material. A small grain crop may be needed as a companion crop at the rate of \_\_\_\_\_ pounds per acre (clip or harvest before it heads out). Additional requirements:*

### Additional Considerations Regarding Field Border:

- Field borders can be used to provide turn and travel areas for equipment and reduce airborne dust. When used for this purpose, establish grasses that are tolerant of heavy use.
- Field borders can be used to comply with required field setback distances applicable to manure and chemical applications.
- Consider mixtures of native or introduced grasses with legumes rather than a single species. An herbaceous border can be over-seeded with legumes to increase plant diversity and to provide additional wildlife benefits.
- Schedule mowing, harvesting and weed control to accommodate wildlife nesting needs and other special requirements or purposes.
- Rows of shrubs (Windbreak/Shelterbelt, 380) adjacent to or scattered shrubs within (natural regeneration or Tree and Shrubs Establishment, 612) field borders will enhance field borders ability to harbor beneficial insects such as pollinators and will also provide additional food and cover for wildlife. Shrub species such as elderberry should be used to provide nesting habitat for native bees. Maintain and encourage dead trees or snags that will provide additional wildlife roosting, nesting and feeding areas.
- If installation or maintenance of the practice has potential of affecting cultural resources (archaeological, historic, historic landscape, or traditional cultural properties), follow NRCS state policy for considering cultural resources.
- Consider using plant species that enhance biomass collection and carbon sequestration opportunities.

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