

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

CONTOUR BUFFER STRIPS

(Acre)

CODE 332

DEFINITION

Narrow strips of permanent, herbaceous vegetative cover established across the slope and alternated down the slope with parallel, wider cropped strips.

PURPOSES

- To reduce sheet and rill erosion.
- To reduce transport of sediment and other water-borne contaminants downslope, on-site or off-site.
- To enhance wildlife habitat

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to cropland. It is most suitable on uniform slopes ranging from 4 to 8 percent.

This practice is not suited to fields with slopes that exceed 200 feet.

The narrow strips of permanent vegetative cover are not a part of the normal crop rotation.

This standard applies to situations where the width of the buffer strips will be narrower than the width of the adjoining crop strips.

CRITERIA

Criteria Applicable to Both Reducing Sheet and Rill Erosion and Reducing Transport of Sediment and Water-Borne Contaminants.

a. Row Grade, Strip Boundaries, and Baselines

The grade of the cropped strip shall be aligned as closely as possible to the contour to achieve the greatest erosion reduction possible. The maximum grade of rows within the crop strips shall not exceed 2 percent.

For crops sensitive to ponded water for periods less than 48 hours, design a positive row grade of not less than 0.5 percent from the nose of a hill or ridge toward a stable outlet.

The grade along the up slope side of the vegetated buffer shall be the same as for the cropped strip directly above it. When the grade of any crop strip reaches the maximum allowable design grade, a new baseline shall be established up or down slope from the last buffer strip and used for the layout of the next crop strip.

b. Arrangement of Strips

Cropped strips shall be alternated with buffer strips down the hill slope. Normally, a crop strip will occupy the area at the top of the hill.

When used in combination with diversions, the layout of buffer strips shall be coordinated with the grade and spacing of the diversion so that strip boundaries will parallel diversion wherever possible. The buffer strip shall occupy the diversion berm, or lie immediately up slope of the diversion.

c. Stable Outlets

Surface flow from contoured crop rows must go to a stable outlet. Stable outlets include grassed waterways, diversions, water and sediment control basins, field borders, headlands or end rows, or similarly stabilized areas.

Additional Criteria to Reduce Sheet and Rill Erosion

a. Width of Strips

The buffer strips shall be of equal width, except when a varying width buffer strip is needed to keep either a cropped strip adjacent to it of uniform width or to maintain the strip boundary grades within the criteria set above. Width of buffer strips at their narrowest point shall be no less than 15 feet for grasses or grass legume mixtures and no less than 30 feet when legumes are used alone.

Cropped strips shall be of uniform width between buffer strips and not exceed the lesser of:

(1) 50 percent of the slope length (L), used for the erosion calculation or 100 feet, which ever is most limiting.

Cropped strip width shall be designed to account for some multiple of full equipment width.

b. Vegetation

Vegetation grown on buffer strips designed to reduce sheet and rill erosion shall be established to permanent vegetation using Pasture and Hayland Standard (512)

The buffer strips shall have 90% ground cover.

c. Level of Erosion Control

The level of erosion control achieved by the buffer strip cropping practice shall meet the acceptable soil erosion level. It shall be determined using the approved erosion prediction technology, accounting for the impact of other conservation practices in the system.

d. Headlands or End Rows

On fields where row crops are a part of the rotation, keep headlands or end rows in permanent sod if their row grade would be

steeper than the designed grade of the crop strip.

Additional Criteria to Enhance Wildlife Habitat

To enhance wildlife habitat, native, warm season grass specie mixture, recommended for wildlife will be used. Follow management practices for the desired specie in the WV Wildlife Habitat Evaluation Technique Manual.

CONSIDERATIONS

The practice is more difficult to establish on undulating to rolling topography because of the difficulty of maintaining parallel strip boundaries across the hill slope or staying within row grade limits.

Protect areas of existing or potential concentrated flow erosion by any one or more suitable conservation practices, such as grassed waterways, water and sediment control basins, or diversion terraces.

Prior to design and layout, consider removing any obstructions or making changes in field boundaries or shape, where feasible, to improve the effectiveness of the practice and the ease of performing farming operations.

Prior to layout, inspect the field's position on the landscape to find key points for commencing layout or getting the width of one set of strips (one cultivated and one buffer) to pass by an obstruction or ridge saddle. Considering grade limits, whenever possible, run strip boundaries parallel with fence lines or other barriers. Account for uncropped access road widths when they must traverse the field by adjusting strip boundaries on either side accordingly.

The standing residual cover provides early and late season nesting and escape cover for many species of wildlife displaced from other mowed areas.

PLANS AND SPECIFICATIONS

The following specifications will be provided to the client and documented in the conservation plan:

1. Location of Baseline (map)
2. Percent grade of stripped crop

3. Location of supporting practices
4. Type and location of stable outlet
5. Buffer width, seed mixture and soil amendments
6. Acceptable mowing date(s) and mowing height
7. Operation and Maintenance plan

OPERATION AND MAINTENANCE

Conduct all farming operations parallel to the strip boundaries except on headlands or end rows with gradients less than the criteria set forth in this standard.

Time mowing of buffer strips to maintain appropriate vegetative density (90%) and a 6 inch height for optimum trapping of sediment from the upslope cropped strip during the critical erosion period(s). If wildlife enhancement is desired, delay mowing until after August 1.

Add soil amendments to buffer strips as needed to maintain stand density.

Mow sod turn strips and waterways at least annually.

Spot seed or totally renovate buffer strip systems damaged by herbicide application after residual action of the herbicide is complete.

Redistribute sediment accumulations along the upslope edge of the buffer-crop strip interface upslope over the cultivated strip when needed to maintain uniform sheet flow along the buffer/cropped strip boundary.

If sediment accumulates just below the upslope edge of the buffer strip to a depth of 6 inches or stem density falls below 75%, relocate the buffer/cropped strip interface location.

Cultivated strips and buffer strips shall be rotated so that a mature stand of protective cover is achieved in a newly established buffer strip immediately below or above the old buffer strip before removing the old buffer to plant an erosion-prone crop. Alternate repositioning of buffer strips to maintain their relative position on the hill slope.