

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

BEDDING

(Ac.)

CODE 310

DEFINITION

Plowing, blading, or otherwise elevating the surface of flat land into a series of broad, low ridges separated by shallow, parallel channels with positive drainage.

PURPOSE

To improve the drainage of surface water.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to areas with flat to nearly flat topography and with poorly drained soils where a wetland determination and scope and effect evaluation permit the installation of this practice.

CRITERIA

All planned work shall comply with all federal, State and local laws and regulations.

Bedding shall run in the direction of the available land slope.

Beds shall be shaped and cross-row ditches provided where required facilitating free movement of water from the crown to the dead furrow.

Crowns shall provide a cross slope of not less than 0.3 percent.

Soils must be of sufficient depth to provide a satisfactory root zone after bedding.

Crown height, width, and maximum length of beds shall be determined on the basis of site conditions and crop requirements.

Parallel channels shall be shallow with side slopes of 8 horizontal and 1 vertical or greater.

Capacity. Channel and outlet capacities shall be based on the appropriate surface drainage coefficient, or on recommended removal rates from the Iowa drainage guide.

Hydraulic Gradient. The velocity of water in the channels shall be slow enough to prevent erosion during storm events and not to exceed those in National Engineering Handbook, Part 650, Engineering Field Handbook, Chapter 14, Water Management (Drainage).

Parallel channels shall be graded toward an outlet.

Outlet. An outlet, natural or constructed, must have sufficient capacity and depth to provide for removal of water from the parallel channels.

CONSIDERATIONS

Consider its effects on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, deep percolation, and ground water recharge.

Parallel channels may be shallow and side slopes steep or flat, based on the soil, crops grown, and local construction and maintenance methods.

Areas where the rooting depth may limit plant growth after construction of the beds should be identified on the plan map.

Consider practices that will mitigate off-site water quality impacts (i.e., wetland treatment areas, filter strips, buffer strips, etc.)

If the bedding will exceed the depth of prior disturbance, this activity could affect significant cultural resources.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

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PLANS AND SPECIFICATIONS

Plans and specifications for bedding shall identify the area where the practice will be applied, the direction of the channel drainage, the crown height, side slope, width, and length of the bed cross section, and location of the outlet. If beds are formed with on-farm equipment, it may take 2 to 3 years to complete beds to the required height.

OPERATION AND MAINTAINENCE

The beds shall be maintained to the planned height. Remove sediment from the

channels as necessary to facilitate drainage and to prevent ponding.

Maintain channels and outlets in a stable condition.

REFERENCES

USDA, Natural Resources Conservation Service, Iowa Field Office Technical Guide, Section IV, Conservation Practice Standards and Specifications.

USDA, Natural Resources Conservation Service, National Engineering Handbook, Part 650, Engineering Field Handbook.