

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

DEEP TILLAGE

(acre)

CODE 324

DEFINITION

Loosening the soil, without inverting and with a minimum of mixing of the surface soil, to shatter restrictive layers below normal plow depth that inhibit water movement or root development.

PURPOSES

This practice may be applied as part of a resource management system to support one or more of the following:

- Improve water,
- Improve root penetration, and
- Improve aeration.

CONDITIONS WHERE PRACTICE APPLIES

On suitable soils, chiseling is applicable if restrictive soil layers are less than 16 in. deep. On suitable soils, subsoiling is applicable if restrictive soil layers are more than 16. Inches deep.

CRITERIA

CONSIDERATIONS

Water Quantity

1. Effects on the water budget components, especially on volumes and rates of runoff and infiltration.
2. Variability of the practice's effects caused by seasonal weather variations.

Water Quality

1. Effects of slope and direction of tillage on sediment delivery to surface water.
2. Effects of the erosion and the movement of sediment, pathogens, and soluble and sediment-attached substances carried by runoff.
3. Potential for development of saline seeps or other salinity problems resulting from increased infiltration near restrictive layers.

PLANS AND SPECIFICATIONS

Specify soils to which each practice is adapted; time of operations, including time of optimum soil moisture; and spacing and direction of tillage if important. Write separate specifications for soils having restrictive layers at different depths.

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