

Prepared for: _____

Prepared by: _____

Farm: _____ Tract: _____ Date: _____



DEFINITION

Performing tillage operations below the normal tillage depth to modify the physical or chemical properties of a soil.

PURPOSE

Deep tillage can be designed to accomplish one or more of the following conservation purposes:

- Fracture restrictive soil layers.
- Bury or mix soil deposits from wind or water erosion or flood over wash.
- Reduce concentration of soil contaminants, which inhibit plant growth.

WHERE USED

This practice applies to land having adverse soil conditions which inhibit plant growth, such as

- compacted layers formed by field operations,
- restrictive layers such as claypans, overwash or deposits from wind and water erosion or flooding, or
- contaminants in the root zone.

This standard includes tillage operations commonly referred to as deep plowing, subsoiling, ripping or row-till, performed from time to time below the normal tillage depth.

CRITERIA

Deep tillage operations will be performed when soil moisture is less than 30 percent of field capacity.

Tillage equipment such as chisels, subsoilers, bent-leg subsoilers, or rippers, with the ability to reach the required depth shall be used.

The depth of tillage will be a minimum of one inch deeper than the depth of the restrictive layer.

Tillage equipment such as moldboard plows and disk plows shall be used to bury soil deposits from wind and water erosion or flood overwash.

The tillage operation will uniformly mix soil 6" or 2 times (2x) the depth of overwash, whichever is deeper, to achieve a desired available water-holding capacity (AWC) and to break the hydrologic barrier caused by soil deposit layer.

CONSIDERATIONS

1. Reduce or control equipment traffic during periods when soils are prone to compaction and formation of tillage pans.
2. When possible, harvest operations should be avoided when soil moisture is greater than 50 percent of field capacity.
3. If application of this practices will impact cultural resources (Archaeological, historic, historic landscape, or traditional cultural properties), follow NRCS national policy and State operating procedures for considering cultural resources.

SPECIFICATIONS

Site-specific requirements for deep tillage are listed on the 324 Specification Sheet. Specifications are prepared in accordance with the NRCS Field Office Technical Guide and are designed to meet the resource needs and the producer's objectives.

OPERATION AND MAINTENANCE

Deep tillage for reduction of soil compaction shall be performed whenever compaction reoccurs. When deep tillage has been performed to reduce the concentration of soil contaminates, the contaminate levels in the root zone shall be monitored to assist with determining when or if treatment will be reapplied.

Additional Operation and Maintenance requirements specific to this Plan:

SPECIFICATIONS

Purpose (check all that apply)	
<input type="checkbox"/> To fracture restrictive layers	<input type="checkbox"/> To reduce concentration of soil contaminants
<input type="checkbox"/> To bury or mix soil deposits from wind; water or flood overwash	

Site Information			
	Field 1	Fields 2	Fields 3
Measured Acres			
Soil Texture			
Map Unit Slope (%)			
Soil Moisture (% field capacity)			
Depth/Restrictive Layer			
Depth of Soil Deposit			
Contaminant (ID & Unit)			

Tillage Information			
	Field 1	Field 2	Field 3
Equipment to be Used			
Depth of Tillage			
Chisel Point Spacing (in)			
Date/Timing of Tillage			