

# DEEP TILLAGE

## PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service—Practice Code 324



### DEEP TILLAGE

Deep tillage means performing tillage operations below the normal tillage depth to modify the physical or chemical properties of a soil. It includes tillage operations commonly referred to as deep plowing, subsoiling, ripping, or row-till, performed from time to time below the normal tillage depth.

### PRACTICE INFORMATION

Deep tillage is conducted on land having adverse soil conditions that 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.

The soil moisture content is a very important factor to consider when performing deep tillage operations. Soil moisture should be less than 30 percent of field capacity at the maximum depth of tillage.

### COMMON ASSOCIATED PRACTICES

Transport of sediment-borne pollutants offsite can be reduced when Deep Tillage is used in a Conservation Management System. On cropland, Deep Tillage is commonly used with Conservation Crop Rotation (328), Residue Management (344), Contour Farming (330), Irrigation Water Management (449), Cover Crop (340), Nutrient Management (590), Pest Management (595), and other conservation practices. On grazing lands, Deep Tillage may be used with Prescribed Grazing (528) and other pasture management practices.

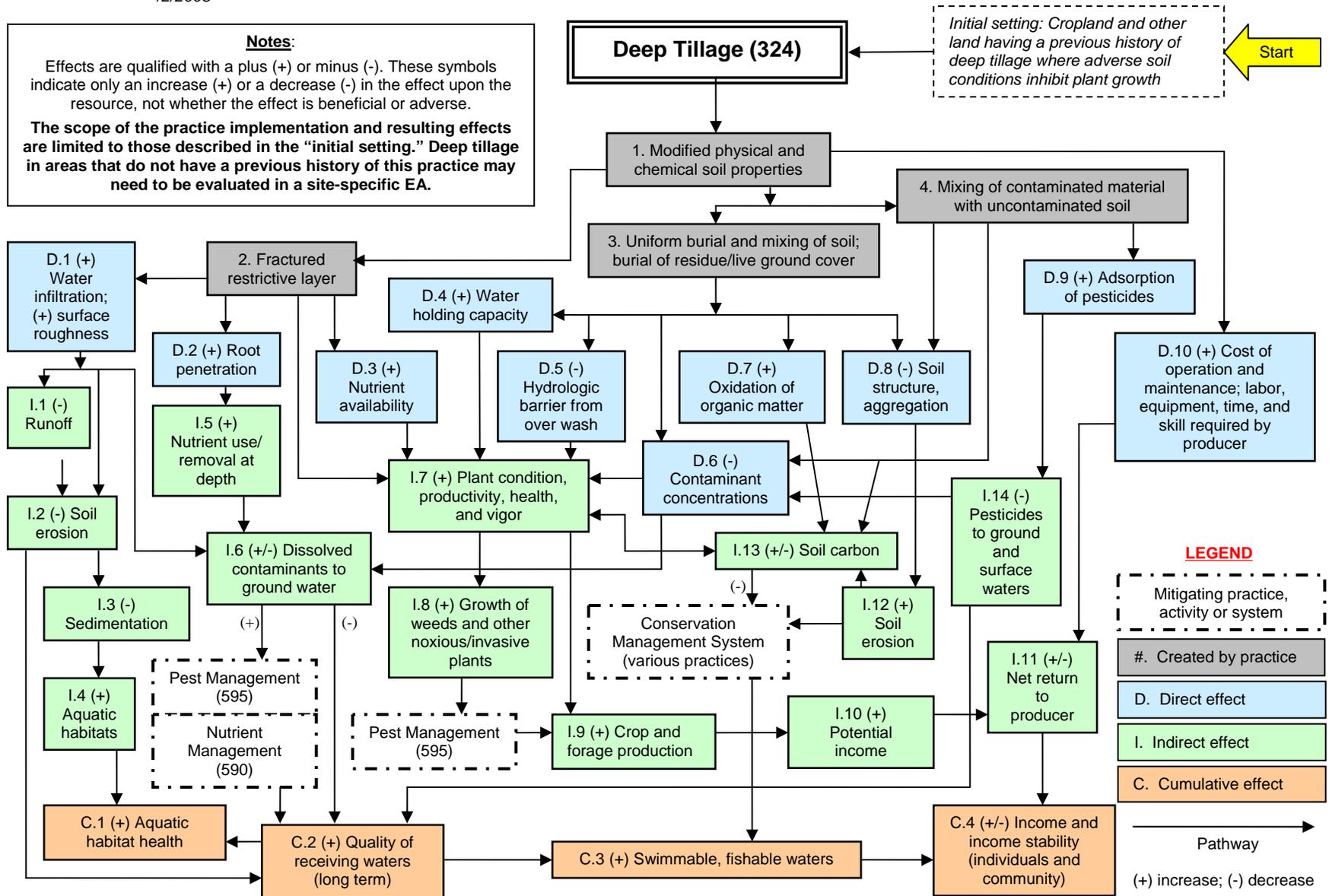
For further information, refer to the practice standard in the local Field Office Technical Guide and associated job sheets and specifications.

The following page identifies the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowner and are presumed to have been obtained. Users are cautioned that these effects are estimates that may or may not apply to a specific site.

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**Notes:**  
 Effects are qualified with a plus (+) or minus (-). These symbols indicate only an increase (+) or a decrease (-) in the effect upon the resource, not whether the effect is beneficial or adverse.  
**The scope of the practice implementation and resulting effects are limited to those described in the "initial setting." Deep tillage in areas that do not have a previous history of this practice may need to be evaluated in a site-specific EA.**



The diagram above identifies the effects expected to occur when this practice is applied according to NRCS practice standards and specifications. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowner and are presumed to have been obtained. All income changes are partially dependent upon market fluctuations which are independent of the conservation practices. Users are cautioned that these effects are estimates that may or may not apply to a specific site.