



## CONSERVATION ENHANCEMENT ACTIVITY

**E345101Z-Colorado**

## CONSERVATION STEWARDSHIP PROGRAM

### Reduced Tillage to Reduce Water Erosion

**Conservation Practice 345: Residue and Tillage Management, Reduced Till**

**APPLICABLE LAND USE: Crop (Annual & Mixed)**

**RESOURCE CONCERN ADDRESSED: Soil Erosion**

**ENHANCEMENT LIFE SPAN: 1 year**

#### **Enhancement Description:**

Establish a reduced tillage system to reduce sheet and rill erosion soil loss. Field(s) must have a soil loss at or below the soil tolerance (T) level for water erosion for the crop rotation and a Soil Tillage Intensity Rating (STIR) of no greater than 40 for each crop in the planned rotation. The current NRCS wind and water erosion prediction technologies must be used to calculate soil loss and STIR.

#### **Criteria:**

- Uniformly distribute residues over the entire field. Removing residue from the row area prior to or as part of the planting operation is acceptable.
- Do not burn crop residues.
- The Soil Tillage Intensity Rating (STIR) value shall include all field operations that are performed during the crop interval between harvest of the previous cash crop and harvest or termination of the current cash crop (includes fallow periods). The crop STIR value ratings shall be no greater than 40, and no primary inversion tillage implements (e.g. moldboard plow) shall be used. Refer to NRCS Tillage Guide for guidance on primary vs. secondary tillage equipment.
- Use the current approved water erosion prediction technology to determine the:
  - Amount of randomly distributed surface residue needed.



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- Time of year the residue needs to be present in the field.
  - Amount of surface soil disturbance allowed to reduce erosion to the desired level of average annual soil loss.
  - Calculations must account for the effects of other practices in the management system.
- In ridge-till systems, plan ridge height and ridge orientation to manage runoff and minimize erosion, with a maximum row grade of 4%.



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## Documentation and Implementation Requirements

Participant will:

- Prior to implementation, provide NRCS with the planned crop rotation and tillage operation(s) used for each crop.

Field	Acres	Planned Crops (in sequence)	Length of Crop Rotation (years)

Field	Crop	Field Operation	Timing of Field Operation (month/year)

- During implementation, notify NRCS of any planned changes in crops, crop rotation, or field operations to verify the planned system meets the enhancement criteria.
- During implementation, no residue will be burned.
- During implementation, all residues will be uniformly distributed over the entire field. Removing residue from the row area prior to or as part of the planting operation is acceptable.
- During implementation, no primary inversion tillage implements (e.g. moldboard plow) will be used.
- After implementation, if changes to the rotation were made, complete the tables above to document the applied Conservation Crop Rotation for the contract period and provide to NRCS.



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NRCS will:

- As needed, provide technical assistance to meet the criteria of the enhancement.
- Prior to implementation, use information provided from the participant to calculate the soil loss and the Soil Tillage Intensity Rating values using current NRCS wind and water erosion prediction technologies. Verify the enrolled field(s) will have a soil loss at or below the soil tolerance (T) level for water erosion for the crop rotation and a Soil Tillage Intensity Rating value of no greater than 40 for each crop in the planned rotation.

“T” = \_\_\_\_\_ t/ac/year Soil erosion = \_\_\_\_\_ t/ac/year STIR values = \_\_\_\_\_

- During implementation, evaluate planned changes in crops, crop rotation, or field operations to verify the planned system meets the enhancement criteria.
- After implementation, if the applied crops, crop rotation, or field operations are different than the planned crops, crop rotation, or field operations, use information provided from the participant to calculate soil loss and the Soil Tillage Intensity Rating values to document that the applied rotation met the enhancement criteria.

Soil erosion = \_\_\_\_\_ t/ac/year and STIR values = \_\_\_\_\_

### Colorado Documentation Requirements:

- Residue and Tillage Management, Reduced till, 345, Implementation Requirements document must be completed per the Plans and Specifications for the planned purpose of reducing water erosion.
- The current NRCS wind and water erosion prediction technologies must be used to calculate soil loss and STIR.

### NRCS Documentation Review:

I have reviewed all required participant documentation and have determined the participant has implemented the enhancement and met all criteria and requirements.

Participant Name \_\_\_\_\_ Contract Number \_\_\_\_\_

Total Amount Applied \_\_\_\_\_ Fiscal Year Completed \_\_\_\_\_

\_\_\_\_\_  
NRCS Technical Adequacy Signature

\_\_\_\_\_  
Date

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