

## ALTERNATIVE CONSERVATION SYSTEM FOR FOOD SECURITY ACT PLANNING

These alternative systems are applicable to all cropland fields which were being farmed during the 1981-1985 crop years. They are not applicable to highly erodible lands brought into production (i.e.: sodbusted) after December 23, 1985, if the land use conversion was from native grassland or trees. They are applicable to lands converted from tame pastureland to cropland after December 23, 1985.

The following percentages and/or CP values are to be used in evaluating alternative conservation systems to determine acceptable levels of conservation treatment. Any system which reduces calculated soil loss to these percentages or less as they relate to potential soil loss will be considered acceptable for FSA purposes. Potential erosion is defined as CI in wind erosion areas and RKLS in water erosion areas. The type of erosion which results in the highest erodibility index will be addressed.

	CP(ft)	Sheet & Rill *CP(ft)	Wind %CI
<b>Low residue row crop</b>	<b>.25</b>	<b>.40</b>	<b>25%</b>
<b>High residue row crop</b>	<b>.20</b>	<b>.34</b>	<b>20%</b>
<b>Low residue close-growing crop</b>	<b>.18</b>	<b>.26</b>	<b>18%</b>
<b>High residue close-growing crop</b>	<b>.15</b>	<b>.21</b>	<b>15%</b>

\*These CP(ft) values are to be used in evaluating alternative conservation systems planned after January 1, 1990. These values apply only to sheet and rill erosion and should be used to evaluate all new plans and plan revisions of HEL land only.

### WIND EROSION EXAMPLE

The % of CI is applied to the CI factor for soils having a higher EI value for wind erosion. The soil loss allowable arrived at by multiplying the soils potential to erode by wind (CI) and the percent for treatment will determine the maximum allowable soil loss for treatment of wind erosion. The producer may plan any combination of the unsheltered distance, residue management, and soil ridge roughness that will result in the allowable soil loss, or provide greater soil erosion reduction. Once determined, the maximum ASCS allowable for the field will remain constant and vary only with changes in the crop residue type or crop row spacing.

A soil with an "I" value of 134 in a county with a "C" factor of 80 would have a potential soil loss of 107.2 tons. If small grain is being produced, multiply the 107.2 times .15 which results in an allowable soil loss of 16 tons per acre per year. Any system which results in soil loss of 16 tons per acre or less would be acceptable.

## WATER EROSION EXAMPLE

An example calculation for a field with a predominate soil having the highest EI for sheet and rill erosion would be as follows:

$$R = 200$$

$$K = .37$$

$$LS = 1.44 \text{ (use the slope-length value for the non-treated condition. This is the same value used in calculation the EI.)}$$

$$CP = \text{(High residue close growing crop)}$$

Calculation:  $200 \times .37 \times 1.44 \times .21 = 22.37$  tons/acre 1 year

Approximately twenty-two tons per acre per year becomes the maximum soil loss allowable for the ACS for this field. The producer may use any combination of slope-length reduction, residue management, and farming practices that will attain, as a minimum, this level of treatment. The ACS allowable for this field will remain constant, unless the crop residue type or crop row spacing is changed by the producer. It is possible for ACS allowables to differ from one year to the next as crops and planting methods change.

Treatment needs for ephemeral gullies will be evaluated on the basis of guidance contained in the Oklahoma Procedure For Determination of Need for Treatment of Ephemeral Gully Erosion. Appropriate practices will be included in the conservation plan when the standard indicates they are needed.