United States Department of Agriculture
Natural Resources Conservation Service

Ephemeral Gully Prediction

WY - ECS - 40C
August 2000

Cooperator: _____ Date:_____

Planner : _____

Field: _____ Soil: _____ Bulk Density: _____(g/cm^3)

Top Width of Gully (ft)	Bttm Width of Gully (ft)	Avg. Width of Gully (ft)	Depth of Gully (ft)	Ave. Cross Section Area Col 3 X Col 4 divided by 2 (ft^2)	Length of Gully (ft)	Soil Lost (ft^3)	Unknown Db Wt of Vol. Lost Col. 5 x Col. 6 x 75 (lbs)	Known Db Wt of Vol. Lost Col. 5 x Col. 6 x Db x 62.4 (lbs)	Years to Form (years)	Erosion Rate (T/Yr) Col. 8(9) / Col. 10 / 2000
Col. 1	Col. 2	Col. 3	Col. 4	Col. 5	Col. 6	Col. 7	Col. 8	Col. 9	Col. 10	Col. 11

To Calculate the Erosion Rate:

1 - Determine the Average Width of the Gully by adding the Top Width (Col. 1) to the bottom width (Col. 2) and dividing by 2. Insert answer in Col. 3.

2 - Determine the Average Cross Sectional Area by multiplying Col. 3 by Col. 4. Insert the answer in Column 5

3 - Determine the Soil Lost by multiplying Col. 5 by the Col. 6. Insert the answer in Column 7.

4 - Determine the Weight of Volume Lost.
If the Bulk Density of the soil is not known, multiply the volume of Soil Lost from Column 7 by 75 or use the values on page C-2, Water Erosion Prediction, Section I, FOTG. Insert the answer in Column 8.
If the Bulk Density of the soil is known, multiply the volume of Soil Lost from Column 7 by the Soil Bulk Density by 62.4. Insert the answer in Column 9.

5 - Determine the Years to Form. Insert the answer in Column 10.

6 - Determine the Erosion Rate by dividing the value in Column 8 or 9 by 2000 to convert to tons, than by the value in Column 10 to convert to tons per year. Insert the answer in Column 11.