

Revised Universal Soil Loss Equation (RUSLE)

RUSLE is the official NRCS conservation planning tool for calculating soil loss from water erosion (excluding gully erosion).

County-Wide data for calculating soil loss using RUSLE is available at the local USDA Service Center (or NRCS field office). Please refer to the table below for local office locations and telephone numbers. Tabular data available at the local office level includes: rainfall and runoff factor (R), soil erodibility factor (K), slope length and steepness factors (LS), cover and management factor (C), and the support practices factor (P).

RUSLE 1.05 - Revised Universal Soil Loss Equation

RUSLE is an erosion prediction model that predicts longtime average annual soil loss resulting from raindrop splash and runoff from specific field slopes in specified cropping and management systems. RUSLE is a replacement for the Universal Soil Loss Equation (USLE) and retains the six factors in that equation. These factors represent the rainfall and runoff factor (R), soil erodibility factor (K), slope length and steepness factors (LS), cover and management factor (C), and the support practices factor (P). Developed by the USDA-Agricultural Research Service, and first released in 1993, this technology has been implemented in field offices of the USDA-Natural Resources Conservation Service and is being used nationally and internationally for prediction of rill and interrill erosion on cropland, and other land uses.

RUSLE2 - Revised Universal Soil Loss Equation

RUSLE2 is currently under development and testing. RUSLE2 predicts long-term, average-annual erosion by water for a broad range of farming systems, and mining, construction, and forestry uses. Its object-oriented, Windows interface allows dramatic scientific and graphical advances. RUSLE2 is derived from previous DOS RUSLE software, and is based on the widely-used Revised Universal Soil Loss Equation (RUSLE). It can reuse much of the extensive data available for that model. It is also a key part of the emerging ARS Modular Soil Erosion System (MOSES). **Expected release date is December 2002.** Once RUSLE2 is officially released, Vermont RUSLE2 data will be available from this site. More information about RUSLE2 can be found at <http://bioengr.ag.utk.edu/rusle2/>

RUSLE has been developed and is maintained by the USDA-Agricultural Research Service (ARS) in cooperation with the USDA-Natural Resources Conservation Service (NRCS), USDI-Office of Surface Mining, Reclamation, and Regulation, USDI-Bureau of Land Management, Soil and Water Conservation Society, University of Tennessee, Purdue University, and University of Minnesota.

Other users include the Department of Defense, U.S. Environmental Protection Agency, U.S. Department of Energy, USDA Forest Service, state agencies regulating land fills, surface mine companies, commercial firms that develop and retail erosion control products, private consultants that develop conservation plans and teach erosion control technology, and university faculty who teach RUSLE in the classroom. RUSLE is used in numerous foreign countries as well.

In the United States, the NRCS is the principal user of RUSLE and has implemented RUSLE in most of its local field offices. The NRCS is the major source for data needed to apply RUSLE and is the leading authority on field application of RUSLE.

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