RUSLE2 Use in Conservation and Nutrient Management Planning

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What is RUSLE2?

Revised Universal Soil Loss Equation, Version 2

- Estimates soil loss from rill and interrill erosion caused by rainfall and overland flow
- Powerful tool for conservation planning, and estimating sediment production
RUSLE2

- RUSLE2 is used by the Natural Resources Conservation Service (NRCS) for all conservation planning
- Including Conservation Compliance Planning
RUSLE2

- Developed by the USDA, Agricultural Research Service (ARS)
- NRCS has contributed significantly to the database development
RUSLE 2
Erosion Prediction Inputs

- Location
- Soil Type
- Topography
- Management
- Conservation Practices
  - Contouring
  - Contour Stripcropping
  - Contour Buffer Strips
Data exchange

- In order for models to exchange data with RUSLE2 they must be able to exchange those required input parameters.
Methods of Data Exchange

1. Incorporate other models within RUSLE2
2. Make RUSLE2 easy to call from other programs
Incorporate Other Models

- **Example**
  - P Index for Kentucky, Tennessee and Pennsylvania

- **Advantage**
  - All inputs are done in the RUSLE2 model
  - Easy for folks familiar with RUSLE2 interface
  - Makes use of complete RUSLE2 database
  - To run the PI, only need the data not available from RUSLE2
Call RUSLE2 from other programs

- **Example**
  - SNAP
    - All inputs are done in the SNAP model
    - SNAP tells RUSLE2 it needs a soil loss calculation and sends the inputs RUSLE2 needs
    - RUSLE2 sends back the soil loss prediction

- **Advantage**
  - SNAP user doesn’t have to know how to run RUSLE2
SNAP Erosion Prediction

- SNAP uses RUSLE2 so for the same exact management system the answer should be the same.
- However, not all available RUSLE2 management systems will be part of SNAP.
- The SNAP soil loss estimate should be viewed as a general estimate that applies to limited scenarios. It should not be used for conservation planning.
RUSLE2 Contact Information

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