

# *RUSLE2 Use in Conservation and Nutrient Management Planning*

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# What is RUSLE2 ?

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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

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

## RUSLE2

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- Developed by the USDA, Agricultural Research Service (ARS)
- NRCS has contributed significantly to the database development

# RUSLE 2

## Erosion Prediction Inputs

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

## Data exchange

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

# Methods of Data Exchange

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

# Incorporate Other Models

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- 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

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- 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

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- 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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