MOSES

Model Uses   MOSES provides managers a tool to predict the outcomes of different management strategies associated with erosion control practices and associated remediation efforts.

Major Categories   Geomorphology; Decision Support

<u>**Subject Knowledge Level**</u>
Intermediate

Minor Categories   Desired Future Conditions; Management; Erosion; Time Series

<u>**Technical Difficulty Level**</u>
Intermediate

Model Type   Physical Model

<u>**Geographic in Nature?**</u>
No

Abstract
The US loses about 5 billion tons of soil annually to water and wind erosion (NRCS 1992 Natural Resource Inventory). MOSES will allow NRCS field personnel and others who are not computer experts, to run complex predictive computer models to compare the effects of alternative management strategies. This tool can not only be used to judge compliance to soil loss ceilings for a field or farm, but also to minimize soil erosion through optimization of both the timing and placement of remediations in the field.

The objective of MOSES is to combine four soil erosion simulation models under a single user interface. This multi-platform interface will be able to access data remotely over the internet. Models offer repeatable results without emotional bias, an advantage over human experts in the event of litigation. MOSES is designed to readily accept data from virtually any source the user has access to, and display model results in graphical form that can be readily understood by field personnel.

Future Developments
Unknown

Model Limitations
Unknown

Model Features
- Combines four soil simulation models (RUSLE, RWEQ, WEPP, WEPS).
- Provides easy to use interfaces allowing non-computer experts access to the model
- Can be used to judge compliance to soil-loss-ceilings and assess remediation effectiveness
- Readily accepts data from virtually any source or type

Required Data Types
Can access data over the Internet and can accept virtually any data the user has access to.

Model Outputs
Model results displayed in a graphical form making them accessible to experience and non-experienced users.

Hardware Requirements
None noted

Software Requirements
None noted

Supported Platforms

DOS	☐	**UNIX**	☐
Windows	☒	**Macintosh**	☐

Cost, Licensing and Availability
Free – available from link below.

Source
USDA Forest Service, Agricultural Resource Service, Natural Resource Conservation Service.

Source URL
http://pasture.ecn.purdue.edu/~meyerc/MOSES/