Quick Start for WEPS 1.0

WEPS is a comprehensive wind erosion model with many options for inputs and outputs. For basic simulations however, WEPS is simple to operate. The following quick start guide will describe how to make a simple simulation run. To learn the more detailed features of WEPS, see the WEPS User Manual.

To start WEPS, double left click on the Weps1.0 icon on the computer screen 'desktop' . Note: the NRCS standard is to start WEPS from the 'Start Menu' (e.g., "Start>Programs>USDA Applications>WEPS>WEPS 1.0"). The WEPS 1.0 main screen will then appear.

A Simple Simulation
For a simple simulation, only four types of information are entered on the main screen.

1.   Describe the simulation field geometry by selecting the field dimensions and field orientation in the panel labeled "Simulation Region Information".
   a.   Type in the specific X-Length and Y-Length field dimensions.
   b.   Enter the specific field orientation (±45° max) relative to true north, in the "Orientation" box.

2.   Select a field location (for weather files).
   a.   In the panel labeled "Location Information", use the mouse to select a State and County from the drop down menus . The closest weather stations to the center of the selected county will be loaded.

3.   Select a soil.
   a.   In the bottom panel of the window, to the right of the button labeled 'Soil', use the mouse to select a soil from the drop down "Template" menu .

4.   Select a management scenario.
   a.   In the bottom panel of the window labeled 'MCREW', use the mouse to select a crop rotation from the drop down "Template" menu .

Once these items are complete, click the 'Run' button on the tool bar at the top of the screen. You will be asked to enter a name for the simulation run and click 'OK'. Once a run name is entered, you will then see indicators that WEPS 1.0 is running. When the simulation run is finished, the "WEPS Run Summary" screen will appear.

WEPS Run Summary

The Run Summary displays user information, input parameter files, and basic soil loss information by rotation year and the average annual for the total simulation. Soil loss output in the Run Summary includes: *Gross Loss*, the average erosion within the field; *Total*, the average total net loss from the field; *Creep/Salt*, the average creep plus saltation net loss from the field; *Suspension*, the average suspension net loss from the field; and *PM10*, the average net loss of particulate matter less than 10 microns in size from the field.

Exiting WEPS 1.0

To exit WEPS 1.0, click "Project" on the menu bar at the top of the main screen, then click "Exit". You will be asked if you want to save your project. You will also be asked to confirm if you really want to exit WEPS 1.0.

Additional Information

WEPS has the capability for many simulation input options, including adding barriers and specifying numerous management options. WEPS also can optionally produce very detailed output to provide the user with a better understanding of what field conditions and management situations cause soil loss by wind. Consult the WEPS 1.0 User Manual for complete details. For further information regarding WEPS, contact:

USDA-ARS Wind Erosion Research Unit
1515 College Avenue
Manhattan, Kansas 66502
U.S.A.

Phone: 785-537-5559
E-mail: weps@weru.ksu.edu
Web: http://www.weru.ksu.edu/weps