





Quick Start for NRCS Users of WEPS


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.

For Windows XP NRCS users, to start WEPS, go to the green “Start” menu at the bottom left corner of the display and select “All Programs”. Navigate to the “USDA Applications” menu, select the “WEPS NRCS” menu and then click the left mouse button on the “WEPS Wind Erosion Prediction” menu option. It will contain the following Weeps icon  to the left of the menu option. The WEPS main screen will then appear. In summary: “Start>All Programs>USDA Applications>WEPS NRCS>WEPS Wind Erosion Prediction”.

A Simple Simulation

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

1. Describe the simulation field geometry by selecting the field shape, dimensions and orientation in the panel labeled “Region”.
 - a. Type in the specific coordinate and/or area information (dependent upon the “shape” selected), e.g: X-Length and Y-Length field dimensions.
 - b. Enter the specific field orientation ($\pm 45^\circ$ max) relative to true north, in the “Orientation” box.
2. Select a field location (for weather files).
 - a. In the panel labeled “Location”, use the mouse to select a State and County from the drop down menus  . Coordinates for a location will be automatically selected near the center of the county. The weather stations for the selected location will be displayed immediately below.
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 menu  .
4. Select a management scenario.
 - a. In the bottom panel of the window labeled ‘MAN’, use the mouse to select a crop rotation from the drop down 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 is running. When the simulation run is finished, the “Run Summary” report screen will appear.

Run Summary

The Run Summary displays user information, input parameter files, and basic soil loss information by rotation year, crop 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

To exit WEPS click “File” on the menu bar at the top right corner of the main screen, then click “Exit”. You will be asked if you want to save your current WEPS project (state of selections made on the interface screen). You will also be asked to confirm if you really want to exit WEPS. Select “Yes” to exit WEPS.

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 and when. Consult the WEPS User Manual for complete details. For further information regarding WEPS, NRCS users should contact:

Mike Sporcic
Wind Erosion Specialist
USDA-NRCS-NTSC
501 Felix St, Bldg. 23
Ft. Worth, TX 76115
U.S.A.

Phone: 817-509-3213
E-mail: Michael.Sporcic@ftw.usda.gov