

Input Changes

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(updated May 25, 2006, Jim Frankenberger)

Minor changes have been made to the soil input file. The following is an example of the new soil input file. This extra line in 2006.2 format soil files has three values indicating the restricting layer characterization. The first number on the line has two choices (1, and 0). “1” means that the saturated hydraulic conductivity of the restrictive layer is specified (in mm/s). “0” means that a restrictive layer is not present and the old (standard) soil input is used. The second number is the anisotropy ratio (horizontal versus vertical) of the saturated hydraulic conductivity for the entire soil profile. When the input anisotropy ratio is less than 0, implying that this site-specific information is not available for the user, a default value of 25 for the anisotropy ratio is then used. The third number indicates the saturated hydraulic conductivity in mm/hr.

Soil Input File

2006.2

#

Created on 18May95 by `WSOL', (Ver. 15Apr95)

Author: YourNameHere

#

xxx

1 1

'Forest Soil' 'Sandy loam' 2 0.06 0.50 4.0e+5 0.0005 1.0 42.0

400 25. 30. 0.5 25. 20.

800 55. 10. 5. 15. 20.

1 50.0 3.6E-3

The WEPP Windows interface will plug-in the following saturated hydraulic conductivity values if a specific restricting layer is selected in the soil editor window.

Table 1. The list of bedrock and corresponding hydraulic conductivity included in WEPP

Rock Name	Saturated Hydraulic Conductivity (mm/hr)
karst and reef limestone	360
limestone, dolomite	0.36
sandstone	0.09
salt	3.6E-5
anhydrite	0.00036
siltstone	0.00036

shale	3.6E-5
permeable basalt	360
fractured igneous and metamorphic rock	3.6
weathered granite	3.6
weathered gabbro	0.36
basalt	0.0036
unfractured igneous and metamorphic rocks	0.00036

Another change made is regarding the use of the newly incorporated Penman-Monteith ET method. When the ET parameter file PMETpara.txt is present in the same folder including the WEPP executive file, the Penman-Monteith method would be used to estimate ET. An example of ET parameter file is included below. The first data in red represents the number of vegetation/crop parameter sets in this parameter file. The data following the number of the vegetation parameter sets are the parameters for different crops. A parameter set typically includes a crop name, the crop coefficient for the mid-season growth stage, the depletion fraction for the crop under 5 mm/day of actual ET, the sequence number of the crop parameter set, and a detailed description of the crop. The data and information in a parameter set can be separated by space or comma.

ET Parameter File

10

Corn,1.20,0.5,1,Corn
SV,0.95,0.3,2,Small Vegetables
SF,1.1,0.35,3,Solanum Family
CF,0.95,0.4,4,Cucumber Family
RT,1.0,0.45,5,Roots and Tubers
LG,1.1,0.45,6,Lugumes
OC,1.1,0.6,7,Oil Crops
CL,1.1,0.55,8,Cereals
TREE20,1.0,0.75,9,Conifer Trees
Cor_6496,1.20,0.5,10,Corn_6496