

## RHEM Input File Parameter Descriptions

From UI Inputs

From DB

Constant

### BEGIN GLOBAL

**CLEN** ! The characteristic length of the hillslope in meters or feet  
**UNITS** ! Metric or English units  
**DIAMS** ! List of representative soil particle diameters (mm or in) for up to 5 particle classes  
**DENSITY** ! List of densities (g/cc) corresponding to the above particle classes  
**TEMP** ! Temperature in degrees C. Not used by RHEM  
**NELE** ! Number of hillslope elements (planes)

### END GLOBAL

### BEGIN PLANE

**ID** ! Identifier for the current plane  
**LEN** ! The plane slope length in meters or feet  
**WIDTH** ! The plane bottom width in meters or feet  
**CHEZY** ! Overland flow Chezy Coeff. ( $m^{1/2}/s$ ) (square root meter per second)  
**RCHEZY** ! Concentrated flow Chezy Coeff. ( $m^{1/2}/s$ ) (square root meter per second)  
  
**SL** ! Slope expressed as fractional rise/run  
**SX** ! Normalized distance  
**CV** ! Coefficient of variation for  $K_e$   
**SAT** ! Initial degree of soil saturation, expressed as a fraction of the pore space filled  
  
**PR** ! Print flag  
**KSS** ! Splash and sheet erodibility coefficient  
**KOMEGA** ! Undisturbed concentrated erodibility coeff. ( $s^2/m^2$ ) value suggested by Nearing 02Jul2014  
  
**KCM** ! Maximum concentrated erodibility coeff. ( $s^2/m^2$ )  
**CA** ! Cover fraction of surface covered by intercepting cover - rainfall intensity is reduced by this fraction until the specified interception depth has accumulated  
  
**IN** ! Interception depth in mm or inches  
**KE** ! Effective hydraulic conductivity (mm/h)  
**G** ! Mean capillary drive, mm or inches - a zero value sets the infiltration at a constant value of  $K_e$   
  
**DIST** ! Pore size distribution index. This parameter is used for redistribution of soil moisture during unponded intervals  
  
**POR** ! Porosity  
**ROCK** ! Volumetric rock fraction, if any. If  $K_e$  is estimated based on textural class it should be multiplied by  $(1 - \text{Rock})$  to reflect this rock volume  
  
**SMAX** ! Upper limit to SAT  
**ADF** ! Beta decay factor in the detachment equation in Al-Hamdan et al 2012 (Non-FIRE)  
  
**ALF** ! Allow variable  $\alpha$  in the infiltration Smith-Parlange Equation,  $\alpha \leq 0.05$ , Green and Ampt  
  
**BARE** ! Fraction of bare soil to total area  
**RSP** ! Rill spacing in meters or feet  
**SPACING** ! Average micro topographic spacing in meters or feet  
**FRACT** ! List of particle class fractions - must sum to one

### END PLANE