

ReFH2 Unit Hydrograph

The following Input Variables are used in ReFH2 Unit Hydrograph



Most of these values are imported from the FEH CD-ROM software package via the **Import** button. However on small catchments it is particularly important to check them against a site survey to verify the data where possible.



ReFH2 unit hydrographs can only be created if the ReFH2 software is installed as this is what calculates the hydrograph and returns it to the software. The ReFH2 software can be purchased from: <https://www.hydrosolutions.co.uk/software/refh-2/>



This method may not be available for your region. For more information, refer to the [Regionalisation](#) topic.

Area - This is the catchment drainage area.

Version - Select either 1999 or 2013. With the 1999 option the six site constants can be typed in. 2013 data can only be loaded in from a valid .csv or .xml file and displays "Point" or "Catchment" based on the data in the file. If a loaded file does not contain 2013 data then the option is disabled.

Site Location - This descriptive field allows the site location to be recorded. If the FEH details are imported from a .csv or .xml file then this field is filled in with the grid reference details.

SAAR - The standard average annual rainfall (1961-1990). This can be determined by clicking on the 'Map' button and selecting the location.

Season - The season that the ReFH2 software will use to generate the associated unit hydrograph.

Recommended seasons are:

Winter - November to April

Summer - May to October

Model - The model that determines whether URBEXT and URBCONC are used in the unit hydrograph calculations. By default this is set to Rural which means the urban fields are not applied, by changing the model to urban the URBEXT field becomes available to edit.

Country - The country that the ReFH2 software will use to generate the associated unit hydrograph.

BFIHOST - Baseflow index derived from Hydrology of Soil Types (HOST) soils data.

DPSBAR - The mean catchment slope. Mean of all inter-nodal slopes. (Not available for FEH Point descriptor files).

DPLBAR - Mean drainage path length. This is the mean of the distances between each node (on a 50m grid) and the catchment outlet. (Not available for FEH Point descriptor files).

PROPWET - The proportion of time when the soil moisture deficit ≤ 6 mm during 1961-1990 as defined by Met Office Rainfall and Evaporation Calculation System (MORECS).

URBEXT - The extent of urban and suburban cover. Either select the 1990 or 2000 values if available or simply enter a user-defined value. Please note that the year 2000 values are only available if using the FEH CD-ROM Version 2. If values for 1990 or 2000 are zero, please check the values as they may not be available from the FEH data. Also ensure the Model is set to Urban otherwise URBEXT will not be applied and not be editable.

URBCONC - A non-editable value that determines the concentration of the urban and suburban cover. Although non-editable this value affects the Unit hydrograph that is produced and so should still be watched in case the FEH data being used needs changed.