Time Area Diagram

Sub-catchments may be entered in the form of a Time/Area spreadsheet. The hydrograph is calculated by combining the rainfall profile with the time area input. The Time / Area diagram accounts for the effect the time of flow into the stormwater control has on the inflow hydrograph.

This method may not be available for your region. For more information, refer to the Regionalisation topic.

Spreadsheet

Enter the area that enters the storage structure for each timestep.

- **Time -** The time area diagram may be specified at a user defined set of time steps.
- **Area -** The area that enters for the given time period, that is from the time entered to the time below.

Import and Export

These allow the current Time Area Diagram details to be imported from and export to file so that the details can be reused.

Clear

The clear button clears the contents of the table.

Percent Impervious

Pervious portion of the Inflows area.

Analysis

The rainfall profile and the time area diagram are combined with the volumetric runoff coefficient in the following way:

$$Q_1 = (I_1 \times A_1) \times 2.78 \times C_v$$

$$Q_2 = (I_1 \times A_2 + I_2 \times A_1) \times 2.78 \times Cv$$

$$Q_3 = (I_1 \times A_3 + I_2 \times A_2 + I3 \times A_1) \times 2.78 \times Cv$$

and so on.