Analysis Criteria

Analysis Criteria is composed of two components: A **Rainfall Method** and general Analysis Settings. Available **Rainfall Methods** are listed to the right, and include **ARR**, **SCS** and **User Defined Design Storms**, as well as user defined **Observed Rainfall** and **Long Term Rainfall**. Please select one of these topics for further information.

General **Analysis Settings** are discussed below.

Analysis Settings

Select Rainfall

Use the dropdown to choose the rainfall from the current rainfall library or click Edit to open the Rainfall Manager.

Perform First Flush Analysis

When selected a First Flush event is added as an extra event as part of the analysis, which is based on the First Flush Rainfall Depth provided in the form.

Rainfall Depth

The depth of rainfall to be applied to the First Flush event.

Output Interval

This is the interval at which the results of the analysis should presented. By default this will be set to every 5 minutes, however a big step maybe more suitable for a long duration analysis. Equally a shorter interval increases the temporal resolution when dealing with a short duration storms.

> ⓘ **Output Interval**
>
> The results are averaged over the output interval period, for example if the Output Interval is 5 minutes and the Analysis Interval is 1 minute, the results calculated for the 1 - 5 minutes intervals are averaged to produce the 5 minutes result.

Increase Rainfall

This will scale all rainfall by the amount specified. This can be used to take climate change, or other factors, into account.

Analysis Interval Mode

The analysis interval can either be automatically calculated by the software or manually entered if you wish to have more control. This is done as 10% of the Output interval, or 10 seconds if this is larger.

Analysis Interval

When the Analysis Interval Mode is set to 'Custom' the ability to enter a specific interval becomes available. By default this will be 30 seconds, however it can be changed to suit the needs of the design. A shorter interval will improve the accuracy, however it will increase run times.
Note: This must be a multiple of the Output interval.

> ⚠️ **Analysis in the presence of Manholes and Junctions**
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> Because of the small surface area of Manholes and Junctions, the water level can vary rapidly in these structures.
> This implies that the Analysis Interval needs to be set to a very small value when the water level in a Manhole or Junction is of interest.
>
> The recommended value in that case is **3 sec**.
> Note that this will result in longer runtimes.

Reference Height Fraction
This value is used in **Muskingum-Cunge** calculation for **Stormwater Controls** and specified the reference flow height for the calculation, as well as determines the base width calculated at that height. This parameter is unitless and its range is 0.01 - 1.0, but by default 0.5 is selected.