

# Analysis Criteria

**Analysis Criteria** is composed of two components: A **Rainfall Manager** and general Analysis Settings. Available **Rainfall Manager** are listed to the right, and include **Australian Rainfall and Runoff**, **SCS** and **User Defined Rainfall**, 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 Criteria

Runoff Type: Dynamic

Output Interval (mins): 5

Select Rainfall: FSR

Method: FSR

Number of Storms: 18

Max Run Time (mins): 2880

Perform First Flush Analysis

Rainfall Depth (mm): 1.0

Time Step: Default

Increase Rainfall (%): 0

Urban Creep (%): 0

OK Cancel Apply

## Runoff Type

This setting allows the choice of which style of runoff method is being used for the analysis and therefore what sort of rainfall source is needed.

- **Dynamic** - The default option that is used by all runoff methods that utilise a rainfall hyetograph to produce the inflow hydrograph
- **Static** - This is only used by the **Simplified Modified Rational** runoff method, which uses a peak rainfall intensity to produce the inflow hydrograph rather than a full hyetograph.

## Select Rainfall

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

### Note

This is relabelled as Rainfall Source and allows the selection of an IDF source when using the Static runoff type

## 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.

### Note

First Flush is only compatible with the Dynamic runoff type

## Output Interval

This is the interval at which the results of the analysis should be 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

## Time Step

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## Workflow - What's next...?



**Inflows** connect to either **Junctions** or **Stormwater controls** via **Inlets**. Specify an **Analysis Criteria** on these objects then choose to connect to another Junction or Stormwater Control.

This controls the internal time step range used by the analysis. The 'Default' setting will be suitable for most designs, however if results begin to show some instabilities the 'Reduced', or 'Shortest' option may be used. The side effect is that the engine will take longer to analyse for the other settings.

 **Note**

The engine updates the length of the computational time-step at every time-step based on the hydraulic conditions. This is to ensure that the time-step has the optimum length to balance the accuracy of the results and the runtime of the simulation.

***Increase Rainfall***

This will scale all rainfall by the amount specified. This can be used to take climate change, or other factors, into account. This adjustment is only possible when using Dynamic runoff; the value entered will not be used for Static runoff.

***Urban Creep***

This will scale the Impermeable area by the amount specified. This can be used to take the increase of urban areas, or other factors, into account