Rainwater Tank Analysis

The Rainwater Tank is considered as two distinct volumes. The Retention volume provides a Harvest Flow which is a constant outflow which is lost from analysis. The Detention volume provides storm water attenuation and an outflow which, in analysis, continues to the next node. Any overflow also passes to the next node.

Physically the Tank may be one tank or two joined by a pipe. In InfoDrainage the two volumes can be described and controlled separately but there is no attenuation allowed between the two volumes.

If the Retention volume is disabled then there is no retention storage or Harvest Flow. If the Retention volume is disabled the Inflow passes directly into the Detention volume which can overflow to the next node. If both volumes are disabled then Inflow passes straight to the Overflow. The diagram below shows how the movement of flow (and pollution load) are analysed.

If the Retention Volume is enabled:
1. Remove the Harvest Flow from the Retention Volume
2. Top-up the Retention volume from the Detention Volume and the same proportion of Pollution load if the Detention volume is enabled

If the Detention Volume is enabled:
1. Remove the Outflow from the Detention Volume and the same proportion of the Pollution Load.
2. Refill the Detention Volume and recalculate the Pollution Load from the Inflow.
3. Remove the Overflow from the Detention Volume and the same proportion of Pollution Load.

Otherwise (Detention volume is disabled), if the Retention Volume is enabled:
1. Refill the Retention Volume and recalculate the Pollution Load from the Inflow.
2. Remove the Overflow from the Retention Volume and the same proportion of Pollution Load.
3. Otherwise (neither volume is enabled), pass the Inflow and Pollution Load straight to the Overflow.