

# Water Quality Objectives

MUSIC incorporates the ability to display the predicted probabilistic water quality conditions at source nodes (eg. urban sub-catchment), treatment nodes (eg. wetland) or receiving nodes, against local or regional water quality concentration standards. Example concentration standards for TSS, TP and TN are provided, however these should only be taken as a guide and do not constitute adopted standards for any particular location. You can add any relevant values that you wish and these are then reflected in the charts when the model is run and the charts are displayed.

The most appropriate water quality concentration standards for the catchment you are investigating are likely to be those that have been derived for that specific catchment, or at least the local region. Use of the example concentration standards is only to demonstrate how the standards may be displayed in the graphs and do not represent any particular locality.

Selected water quality standards can be displayed on either the Time Series Graph or Cumulative Frequency Graphs (more detail on these is provided in [Types of Output](#)).

Water quality concentration standards are usually specified in the form of a threshold water quality concentration value, and a required compliance frequency for that value. The use of the cumulative frequency curves is the best means of assessing the performance of a stormwater quality treatment strategy against the water quality standards. For example, the TSS standard for Brisbane specifies a median daily value of 15mg/L. This means that TSS concentration in Brisbane should not exceed 15mg/L more than 50% of the time.

Irrespective of the time-step used in model simulation, the model compiles predicted water quality concentrations for cumulative probability analysis in several forms:

1. Daily mean - the flow-weighted mean concentration for each day,
2. Daily maxima - the maximum concentration in any time-step for each day,
3. Daily sample - the concentration in a randomly selected time-step each day,
4. All data - the concentration in all time-steps (any time-step in which there is no flow will be recorded as zero concentration).
5. Flow-based sub-sample - the concentration in all time-steps for which the flow falls within a user-specified range.

You can choose the time-step of analysis for the production of statistics. For example, even if the model is run at a 6 minute time-step, statistics can be produced at an hourly or daily time-step, if required.