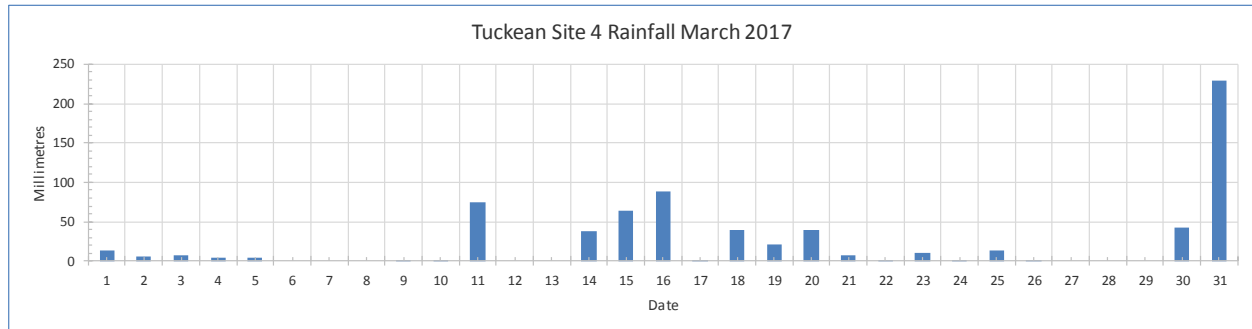


Tuckean site 4 water quality – March 2017

Data logger located in Tuckean Swamp, Northern NSW



Interpretation

Note – Due to a fault the logger ceased recording in February and a fault in the new replacement equipment required it to be sent back to the USA for repair. The new equipment has since been received back and installed at North Creek to replace faulty equipment which when repaired will then be installed at site 4.

Electrical conductivity (EC) during March the EC sensor did not record. EC measures the ability of the water to conduct an electric current, which is the inverse of electrical resistance (R expressed in ohms) and is affected by rain and runoff, acid water, tidal brackish water and temperature.

pH was not recorded in March. Peaks of pH normally occur in late afternoon as plants draw CO² from the water, while troughs occur in early mornings as plants respire CO² forming carbonic acid. pH is measured on a logarithmic scale, therefore each consecutive whole number below neutral represents 10 times the acidity that the previous number.

Water temperature. Water temperature was not recorded by the data logger in March. Temperature variations are caused by cloud cover affecting solar radiation and air temperature, while rain, degree of shading, and season also affect water temperature.

Water level was not recorded in March. Rainfall, tidal fluctuations, river level, sluice gate opening, in stream vegetation, sediment build up and drain blocks and to a lesser extent temperature, wind and barometric pressure can all affect the water level.

Rainfall during March at the site 4 data logger failed to record, however a nearby station recorded 710.5 mm over 23 days, which compares to the February reading of 143.4 mm over 9 days. Peak daily rainfall of 229 mm was recorded between 9:00 am on 30th and 9:00 am on the 31st March. During March, the Rocky Mouth Creek data logger located 19 km to the SSW recorded 702.4 mm over 28 days, while Ballina AWS located 19 km to the NE recorded 432.2 mm over 20 days.