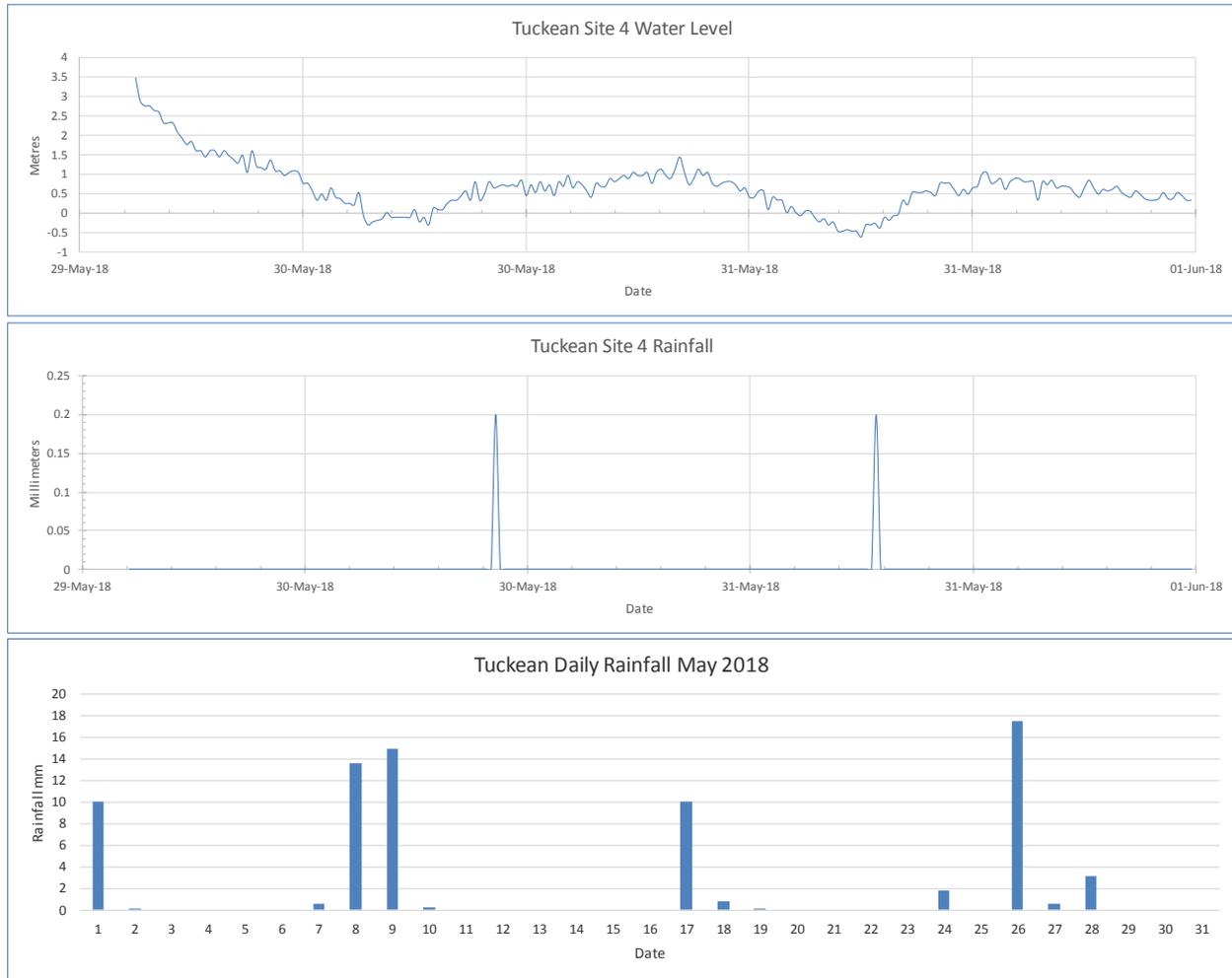


Tuckean site 4 water quality – May 2018

Data logger located in Tuckean Swamp, Northern NSW



Interpretation

Note – Due to a fault the logger ceased recording in February 2017. Data logger maintenance recommenced on 28th March 2018 and the logger is being rebuilt with depth and rainfall recorded from 29th May 2018. Monthly rainfall data has been supplied by a nearby station.

Electrical conductivity (EC) during May EC 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 May. 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 May. 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 until 29th May however levels need to be surveyed to AHD. 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 the site 4 data logger failed to record after 11th February 2017 and recommenced from 29th May 2018, however during May 2018 a nearby station recorded 73.4 mm over 13 days, which compares to the April 2018 reading of 142.4 mm over 19 days. Peak daily rainfall of 17.5 mm was recorded between 9 am on 25th and 9 am on the 26th May. During May the Rocky Mouth Creek data logger located 19 km to the SSW recorded 71.2 mm over 25 days, while the Ballina AWS located 19 km to the NE recorded 64.4 mm over 14 days.