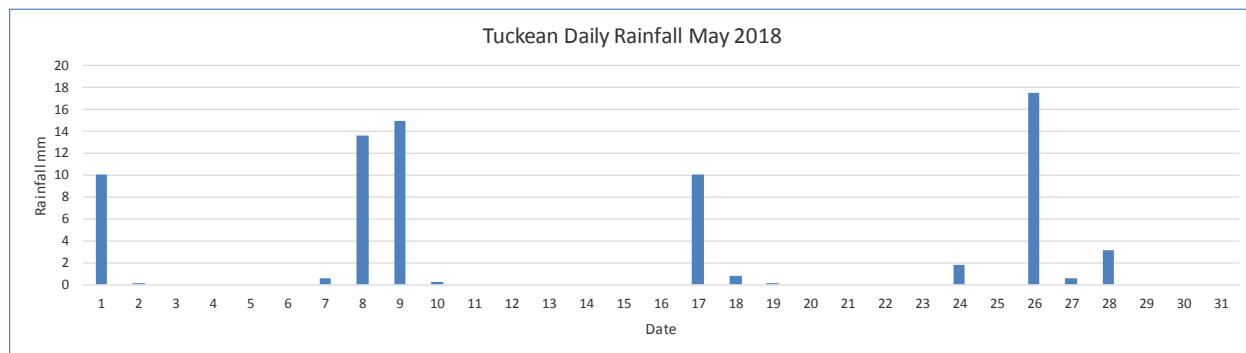


Tuckean site 2 water quality – May 2018

Data logger located upstream of Bagotville Barrage, Tuckean Swamp, NSW



Interpretation

The data logger failed on 5th November 2017 for EC, pH and water temperature but continued to transmit water level data. Due to difficulty with access, maintenance recommenced in March 2018 with the solar panel and enclosure requiring replacement. The site is in the process of being rebuilt and should be re-established in early June.

- **Electrical conductivity (EC)** at site 2 was not recorded in May. EC is directly related to salinity and is the inverse of electrical resistance in ohms. Water is considered fresh if below 1.8 ms/cm, brackish from 1.8 – 4.8 and saline above 4.8 with seawater approximately 60 ms/cm.
- **pH** in May was not recorded. On the pH scale neutral is at pH 7 and for every consecutive whole number below 7 acidity increases by ten times on a logarithmic scale. pH in an acid sulfate soil environment is affected by surface and groundwater level, drainage, rainfall, runoff and tidal exchange.
- **Water temperature** for May was not recorded. Water temperature normally peaks in the late afternoon as air temperature and solar radiation decreases. Temperature variations can be caused by a combination of factors including solar radiation, air temperature, tidal exchange, day /night, riparian shade, turbidity and rainfall.
- **Water level** was not recorded during May. Water height at site 2 fluctuates with tides, degree of sluice gate opening, river height, rainfall in the catchment and to a lesser extent temperature, wind and barometric pressure.
- **Rainfall** at the site 4 data logger situated 4 km to the north failed to record after 11th February 2017 and recommenced on 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 9am on 25th and 9am 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.