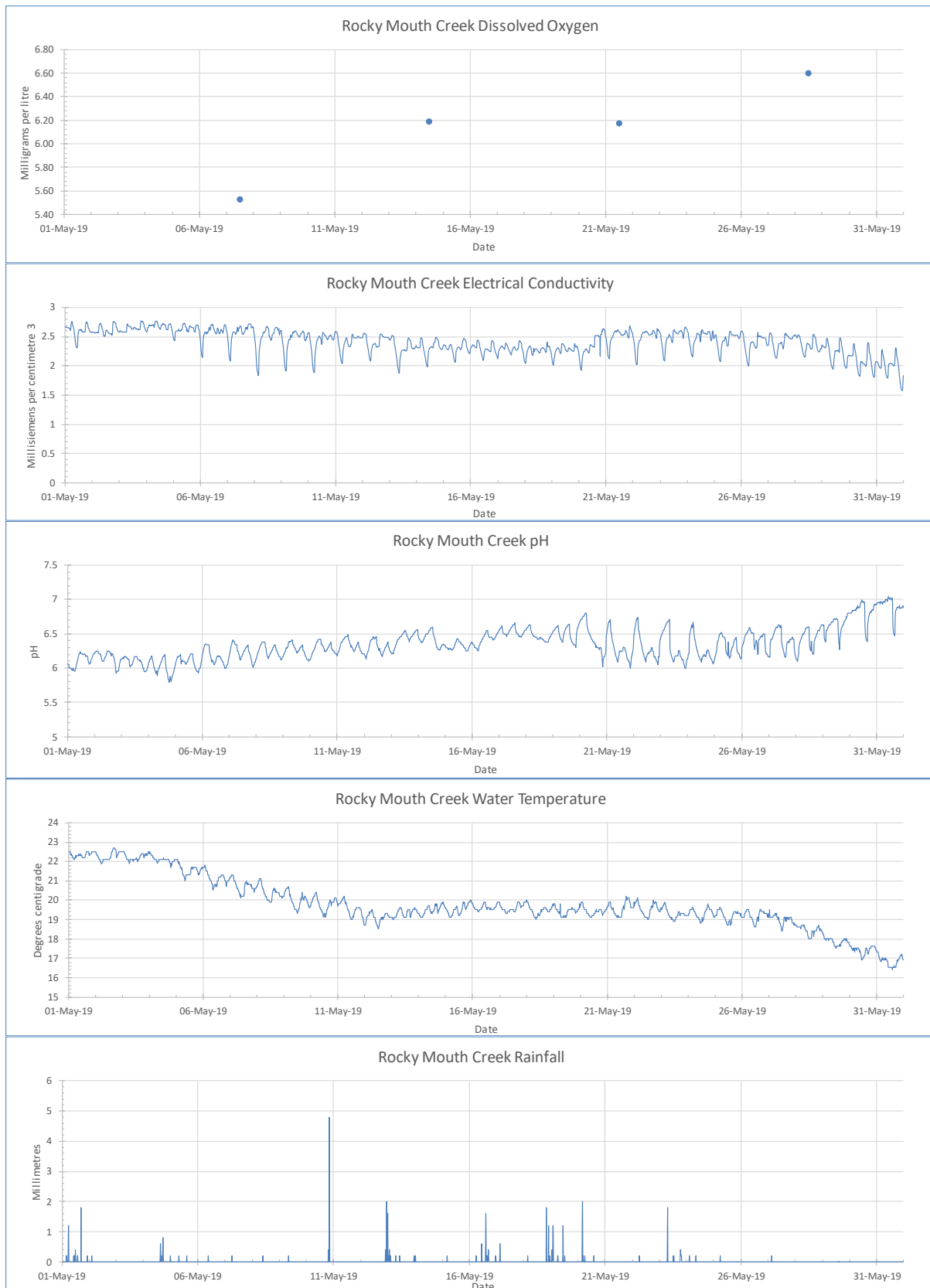


Rocky Mouth Creek (RMC) water quality – May 2019

Data logger on upstream side of floodgates



Interpretation

Note – DO readings are being substituted with weekly manual measurements. The site was cleaned and calibrated on 20th May.

- **Dissolved oxygen (DO)** for May was recorded by weekly manual measurements ranging between 5.55 and 6.62 milligrams per litre (mg/L) and averaging 6.2, which has decreased by 0.2 when compared to the April average of 6.4 although reading can vary between tides. Levels below 3 mg/L are considered critical to most fish, from 3 to 6 is considered marginal and 6 to 8 optimal. DO is mainly affected by organic and inorganic loadings but is also affected by temperature, barometric pressure, salinity, wind and wave action.
- **Electrical conductivity (EC)** is measured in millisiemens per cubic centimetre (ms/cm³) and represents salinity with seawater equivalent to approximately 60 ms/cm³. During May levels ranged between 2.4 and 8.9 ms/cm³ with an average of 2.4 ms/cm³, which is considered brackish and has fallen by 1.0 compared to the April brackish average of 3.4. EC fell through the month due to continued rainfall. EC not only indicates salinity from sodium chloride, but also acid salts. Levels below 1.8 ms/cm are considered freshwater, while 1.8 to 4.8 ms/cm is considered brackish and above 4.8 saline. EC is affected by rainfall, runoff, temperature and tidal exchange.
- **pH** for May was recorded from 4.4 to 6.8 with an average of 6.4 which is 0.8 higher, or 6.3-times decreased acidity when compared to the April average of 5.6 due to decreased rainfall and runoff during May when compared to April. pH 7 is considered neutral with acid concentration increasing on a logarithmic scale equal to ten times for every whole number below 7 while pH above 7 is considered alkaline.
- **Water temperature** recorded during May ranged between 16.5°C and 22.7°C giving a range of 6.2° with an average of 19.8°C which has decreased by 3.1° from the April average of 22.9 due to decreasing air temperature and seasonal change. Water temperature is influenced by season, solar radiation and degree of shading, cloud cover, tidal movement, air temperature, day/night, turbidity and rainfall.
- **Rainfall:** during May, the Rocky Mouth Creek data logger recorded 49.0 mm over 23 days which compares to the April reading of 211.8 mm over 23 days. Most readings were from due or light rain while the highest fifteen-minute rainfall for the month was 4.8 mm, which occurred on 10th May between 7:45 pm and 8:00 pm. During May the Tuckean site 4 data logger situated 19 km to the north recorded 68.8 mm over 21 days, while the Ballina AWS located 37 km to the north-east recorded 94.0 mm over 17 days.