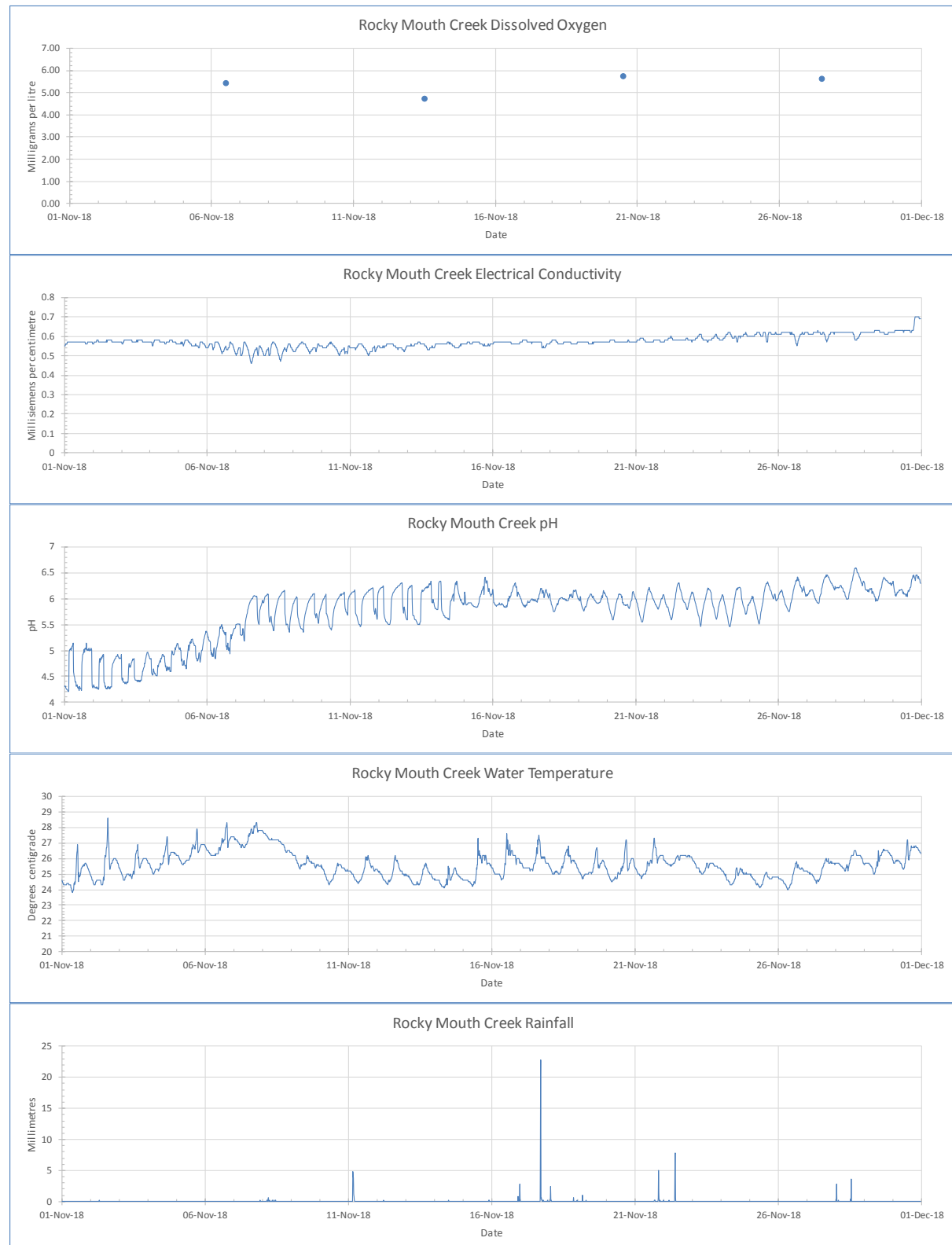


Rocky Mouth Creek (RMC) water quality – November 2018

Data logger on upstream side of floodgates



Interpretation

Note – DO readings are being substituted with manual measurements.

- **Dissolved oxygen (DO)** for November was recorded by weekly manual measurements between 4.8 and 5.8 milligrams per litre (mg/L) averaging 5.5 which has fallen by 0.9 when compared to the October average of 6.4. 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 centimetre (ms/cm) and represents salinity with seawater equivalent to approximately 60 ms/cm. During November levels ranged between 0.46 and 0.70 ms/cm with an average of 0.57 ms/cm, which is considered fresh and has fallen compared to the October average of 0.82. 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 November was recorded from 4.2 to 6.6 with an average of 5.7 which is 0.3 higher or half the acidity of the October average of 5.4 due to reduced rainfall and less acid discharge from drains. pH 7 is considered neutral with acid concentration increasing on a logarithmic scale equal to ten times for every whole number below 7 while above 7 is considered alkaline.
- **Water temperature** recorded during November ranged between 23.9°C and 28.6°C giving a range of 4.7° with an average of 25.6°C which has increased by 3.0° from the October average of 22.6 due to 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 November, the Rocky Mouth Creek data logger recorded 96.0 mm over 14 days which compares to the October reading of 239.0 mm over 20 days. The highest fifteen-minute rainfall for the month was 22.8 mm, which occurred on 17th November between 5:00 pm and 5:15 pm. There were multiple dew readings of 0.2 mm during November as the site is located over water. During November the Tuckean site 4 data logger situated 19 km to the north did not record for the entire month however a nearby station recorded 45.8 mm over 8 days, while the Ballina AWS located 37 km to the north-east recorded 106 mm over 6 days.