Weekly River Monitoring Report

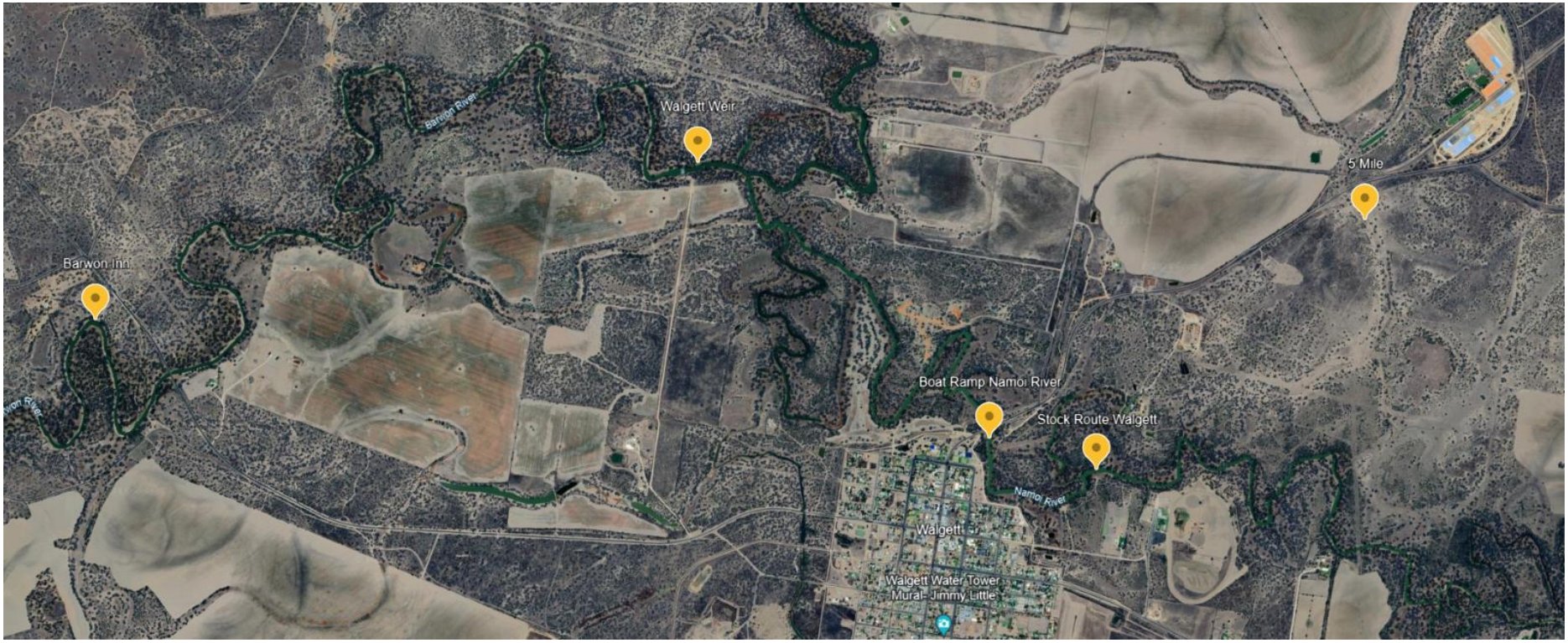
13th March 2024

Introduction

This data was collected on Wednesday 13th March 2024 between 10am and 1pm on the Ngamaay (Namoi) and Baawan (Barwon) River.

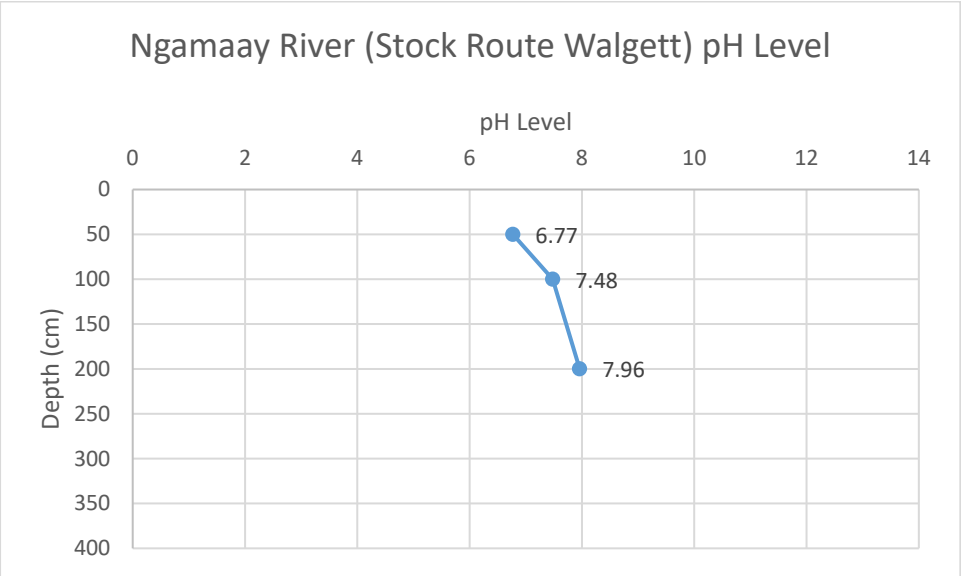
The Dharriwaa Elders Group River Rangers are conducting weekly water quality testing, measuring a range of factors that affect the quality of the river water. Different results affect the health of native animals and plants, and the health of the people that rely on the river for food and water.

Picture: Map of the Baawan (Barwon) River and Ngamaay (Namoi) River where the DEG River Rangers do their water quality monitoring.



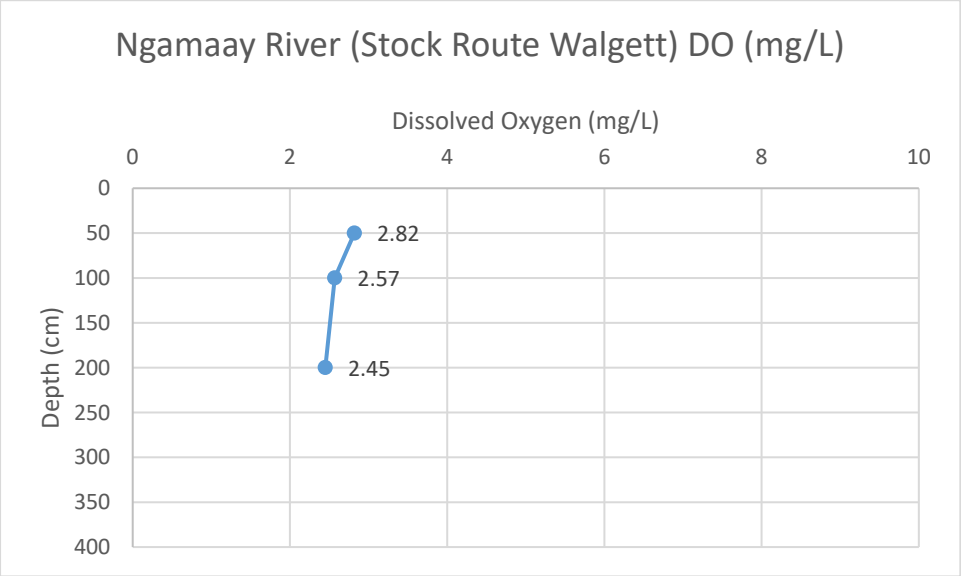
Site one: Ngamaay River (Stock Route Walgett)

pH Levels



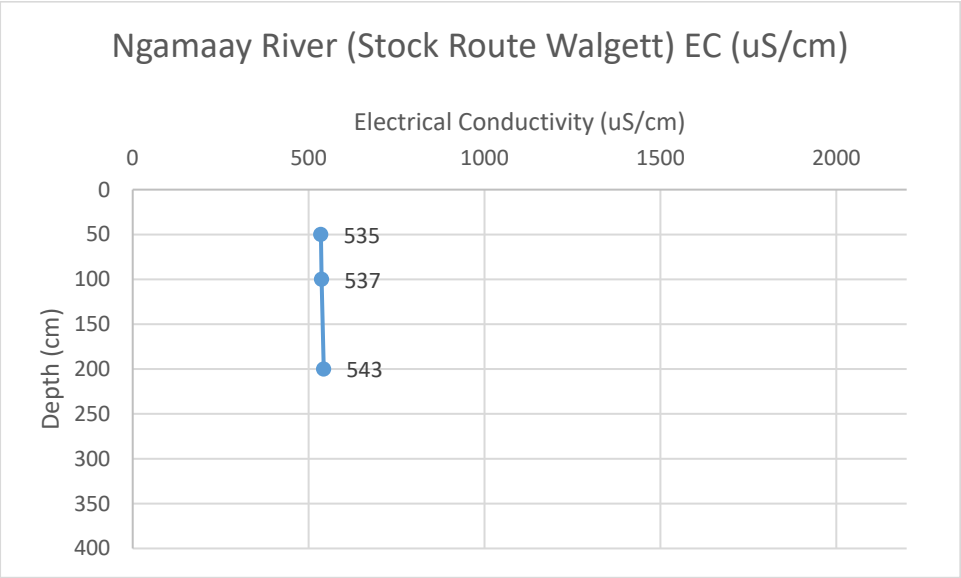
The pH at site one on the Ngamaay River is within a good range. This means that the water is not too alkaline or acidic.

Dissolved Oxygen



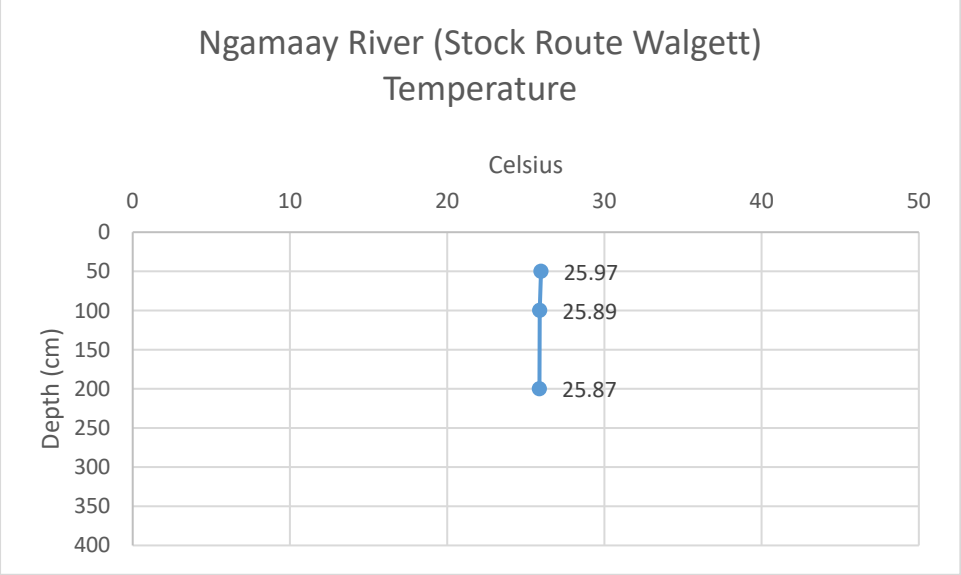
The dissolved oxygen is still at a dangerously low level at site one on the Ngamaay River. When the dissolved oxygen level is below 3mg/L fish may struggle and may be in a stressful state.

Electrical Conductivity



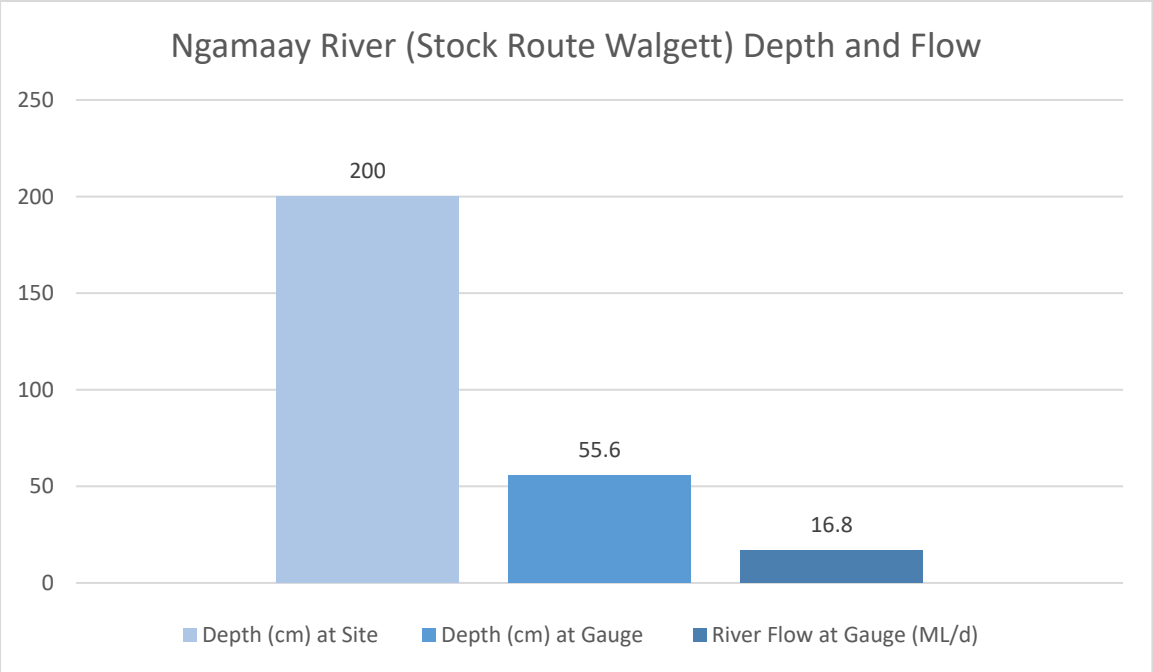
The electrical conductivity is a measurement of salinity. The salinity at site one on the Ngamaay River is within a good range. This is good for freshwater fish. The EC limits for freshwater fish are between 125 - 2200 uS/cm.

Temperature



The temperature measured at site one are within a good range. This is good for freshwater fish. There are no extreme differences between the temperatures at each depth which means that there is no danger to the fish.

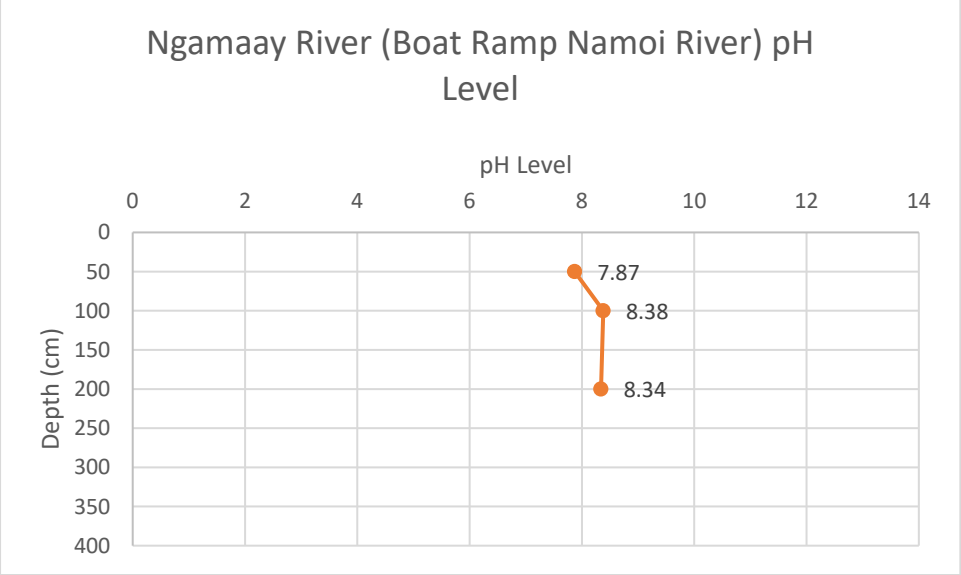
River Depth and Flow



The river depth at both the site and the nearest working gauge (Namoi@Goangra 419026) is good for small, medium large fish. The flow at the nearest gauge is below the optimal level. This could cause health issues for native fish.

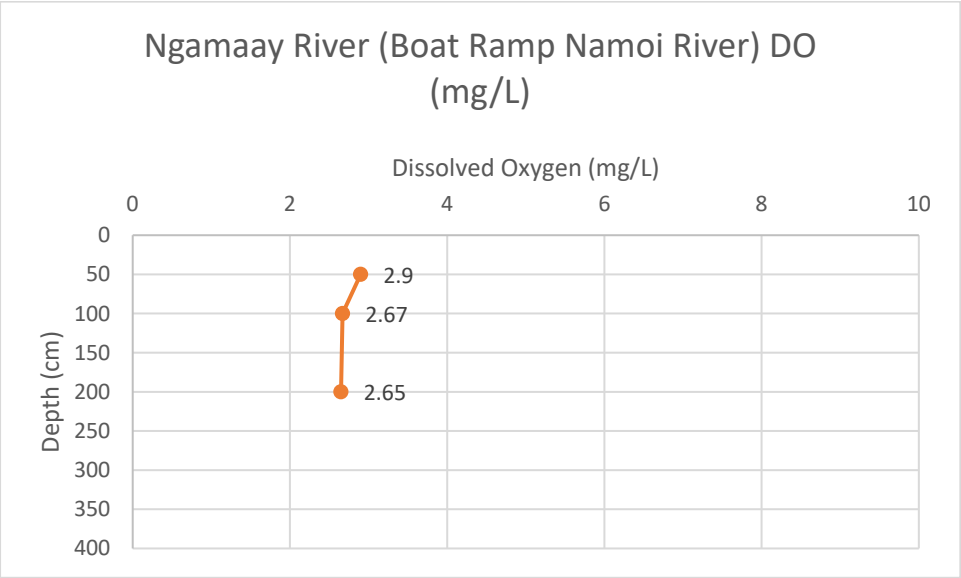
Site Two: Ngamaay River (Boat Ramp Namoi River)

pH Levels



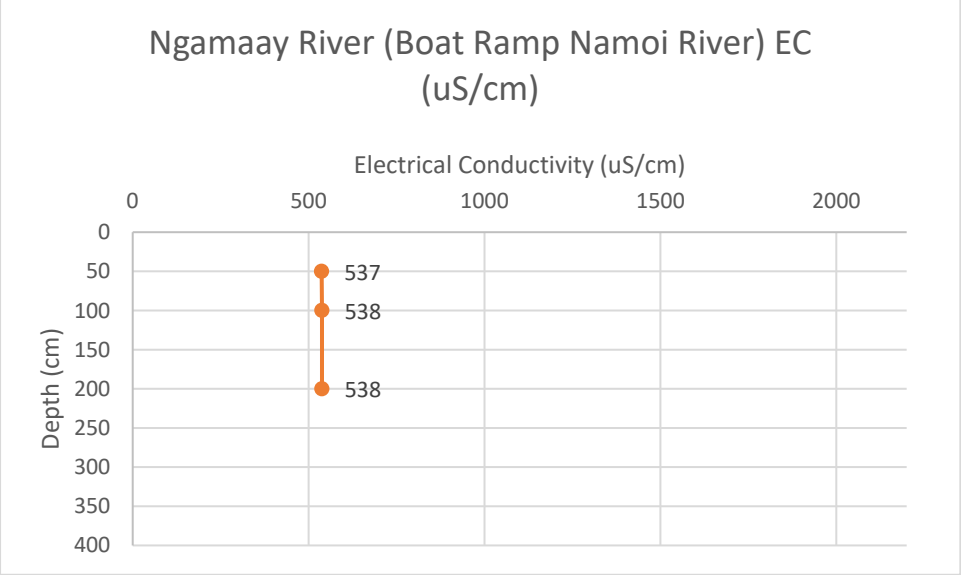
The pH a site two on the Ngamaay River is within a good range. This means that the water is not too alkaline or acidic.

Dissolved Oxygen



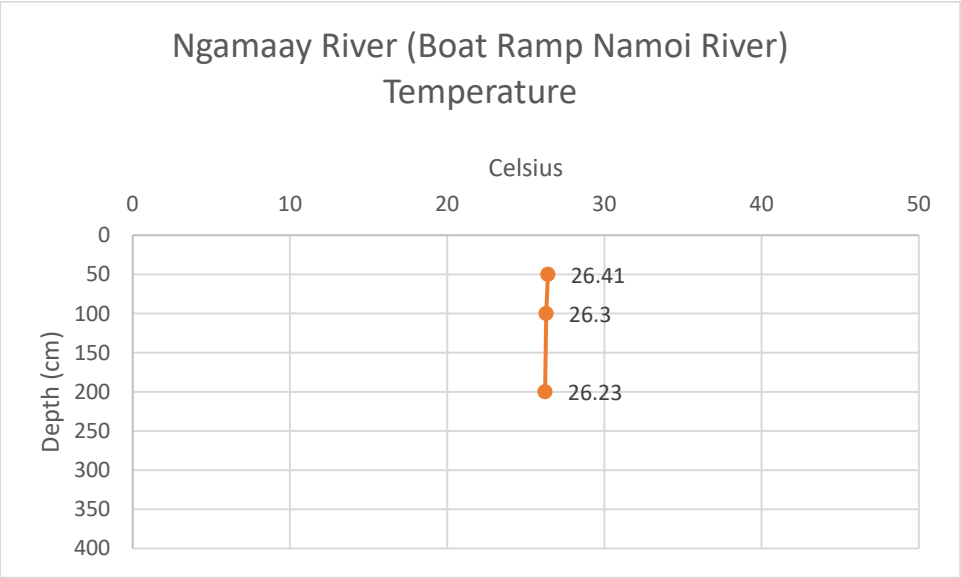
The dissolved oxygen is still at a dangerously low level at site two on the Ngamaay River. When the dissolved oxygen level is below 3mg/L fish may struggle and may be in a stressful state.

Electrical Conductivity



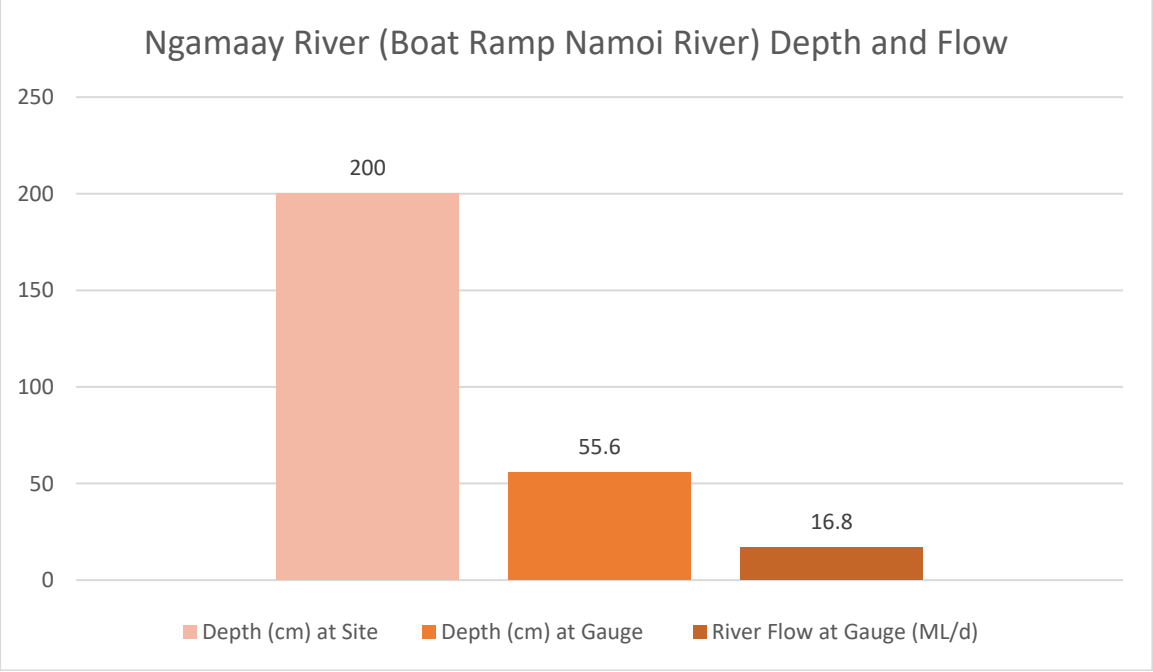
The electrical conductivity is a measurement of salinity. The salinity at site two on the Ngamaay River is within a good range. This is good for freshwater fish. The EC limits for freshwater fish are between 125 - 2200 uS/cm.

Temperature



The temperature measured at site two are within a good range. This is good for freshwater fish. There are no extreme differences between the temperatures at each depth which means that there is no danger to the fish.

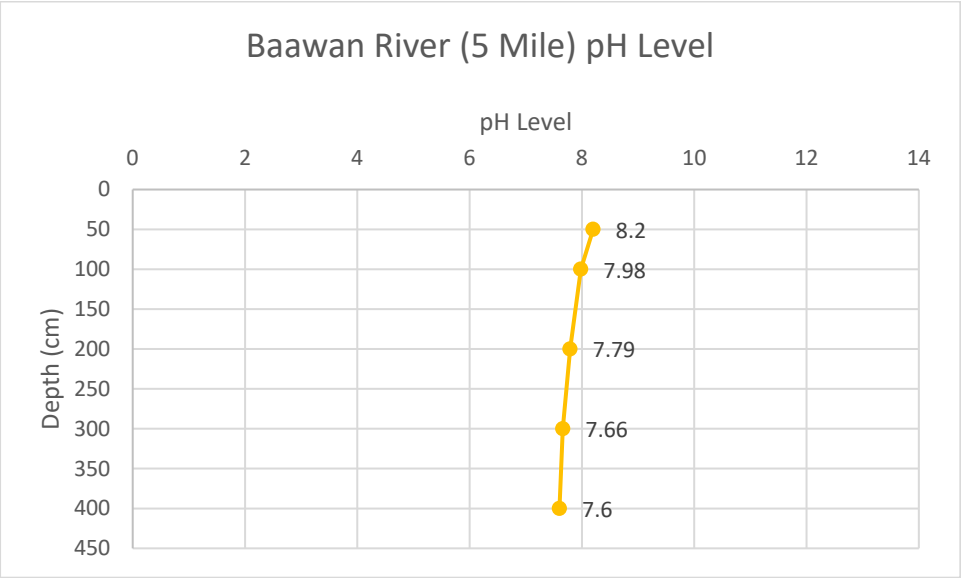
River Depth and Flow



The river depth at both the site and the nearest working gauge (Namoi@Goangra 419026) is good for small, medium large fish. The flow at the nearest gauge is below the optimal level. This could cause health issues for native fish.

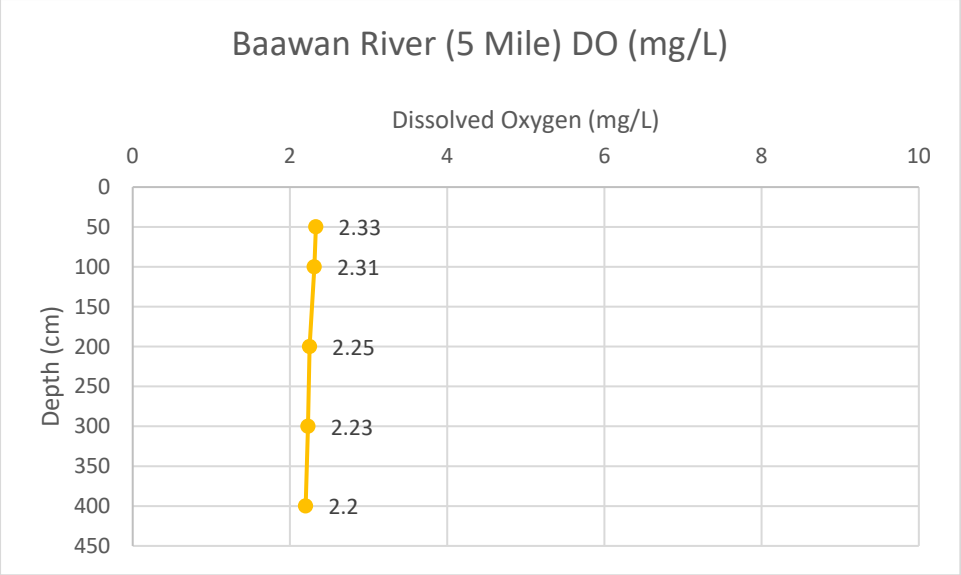
Site Three: Baawan River (5 Mile)

pH Levels



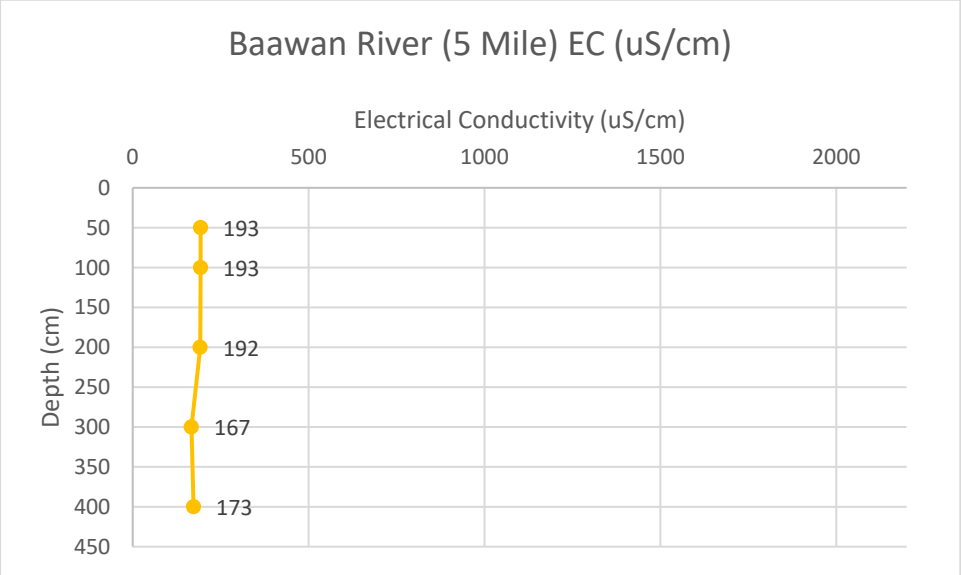
The pH a site three on the Baawan River is within a good range. This means that the water is not too alkaline or acidic.

Dissolved Oxygen



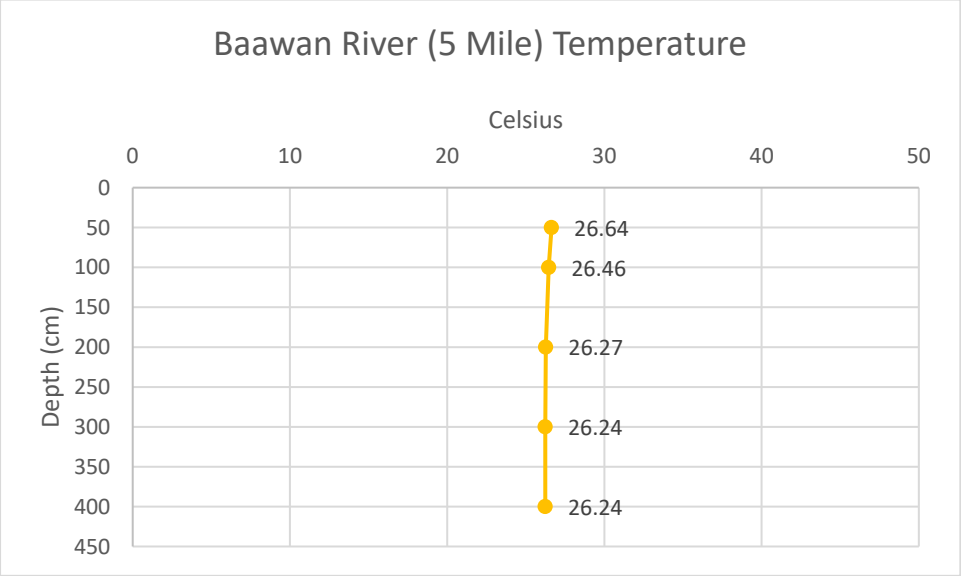
The dissolved oxygen is still at a dangerously low level at site three on the Baawan River. When the dissolved oxygen level is below 3mg/L fish may struggle and may be in a stressful state.

Electrical Conductivity



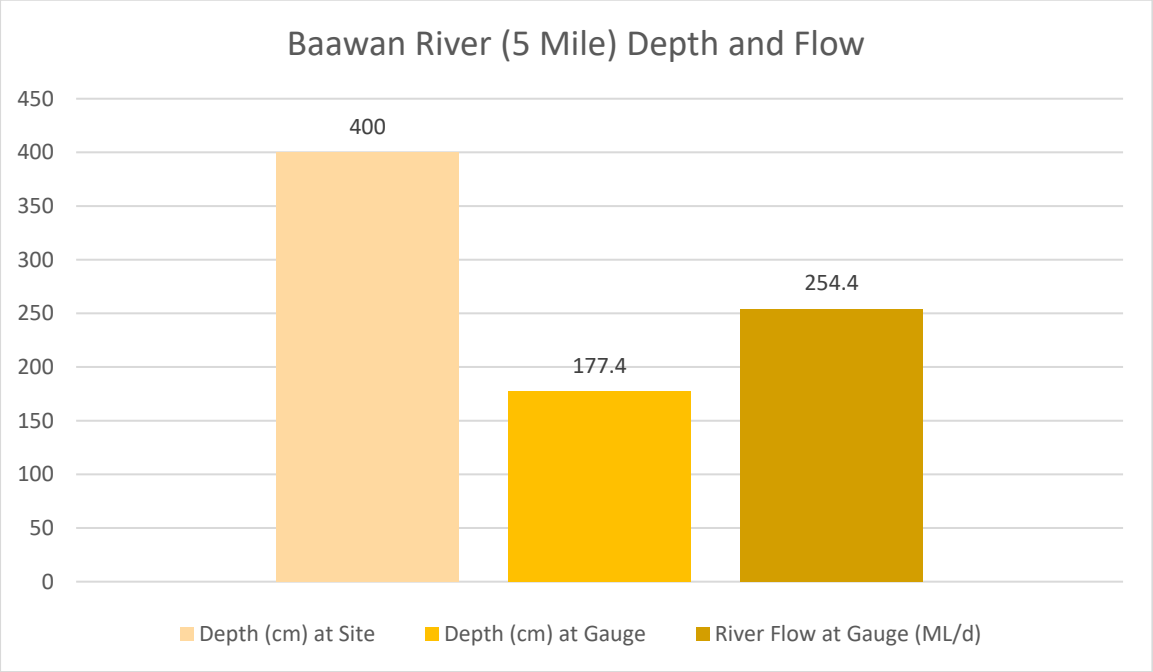
The electrical conductivity is a measurement of salinity. The salinity at site three on the Baawan River is within a good range. This is good for freshwater fish. The EC limits for freshwater fish are between 125 - 2200 uS/cm.

Temperature



The temperature measured at site three are within a good range. This is good for freshwater fish. There are no extreme differences between the temperatures at each depth which means that there is no danger to the fish.

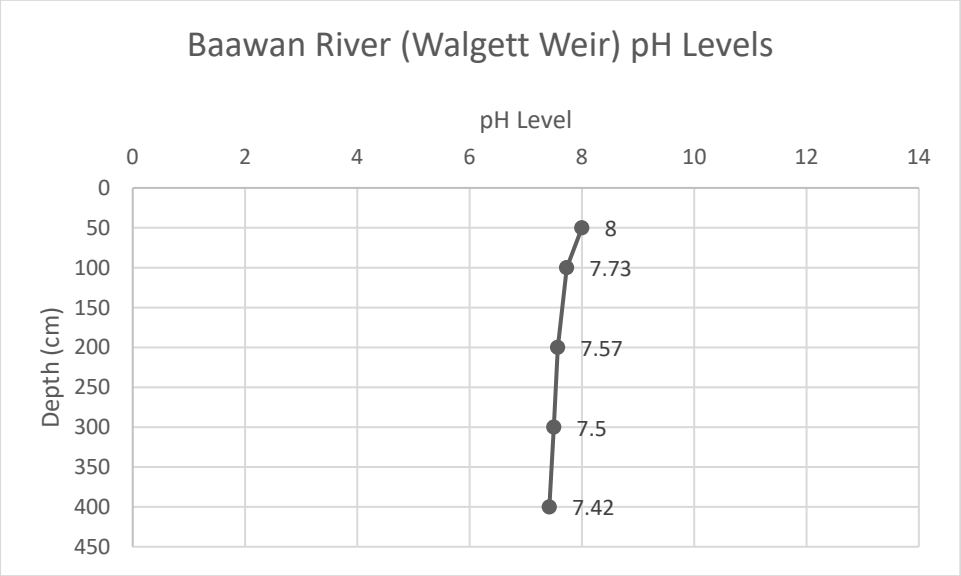
River Depth and Flow



The river depth at both the site and the nearest working gauge (Barwon@Collarenebri 422003) is good for small, medium large fish. The flow at the nearest gauge is within a good range this is good for native fish.

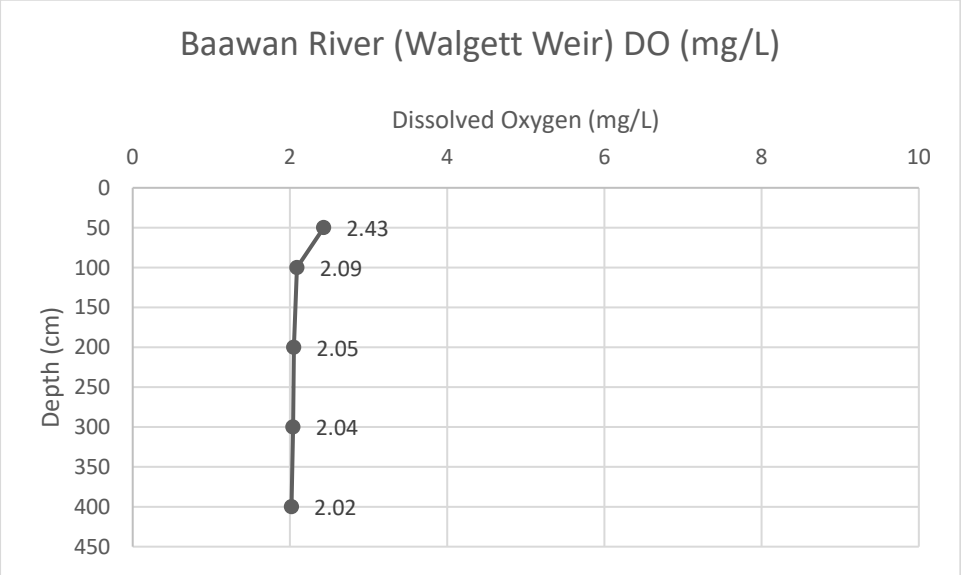
Site four: Baawan River (Walgett Weir)

pH Levels



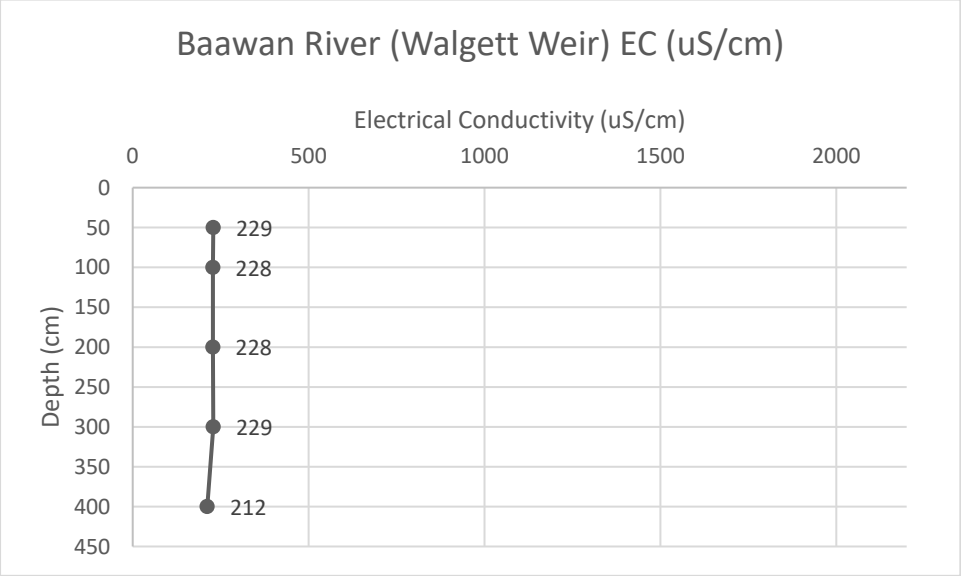
The pH a site four on the Baawan River is within a good range. This means that the water is not too alkaline or acidic.

Dissolved Oxygen



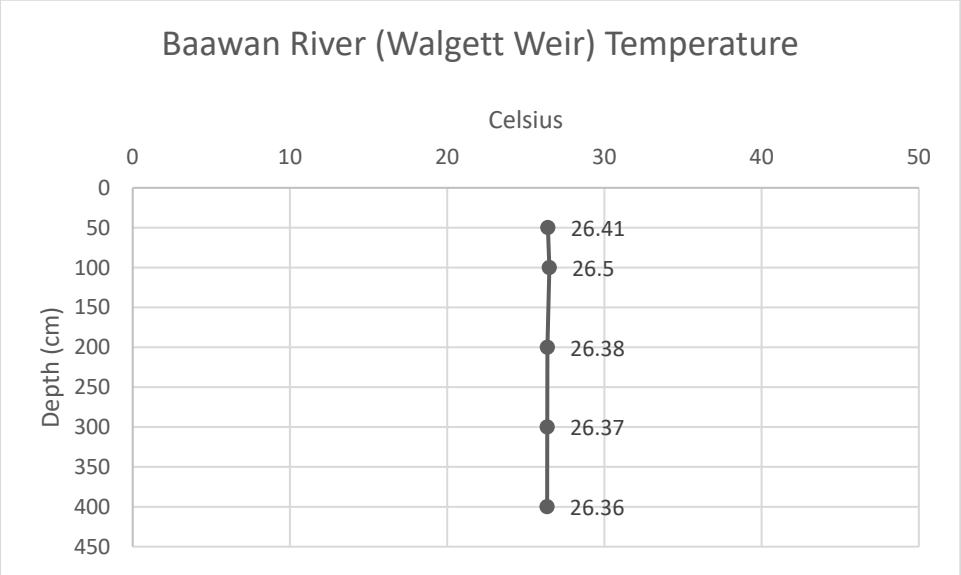
The dissolved oxygen is still at a dangerously low level at site four on the Baawan River. When the dissolved oxygen level is below 3mg/L fish may struggle and may be in a stressful state.

Electrical Conductivity



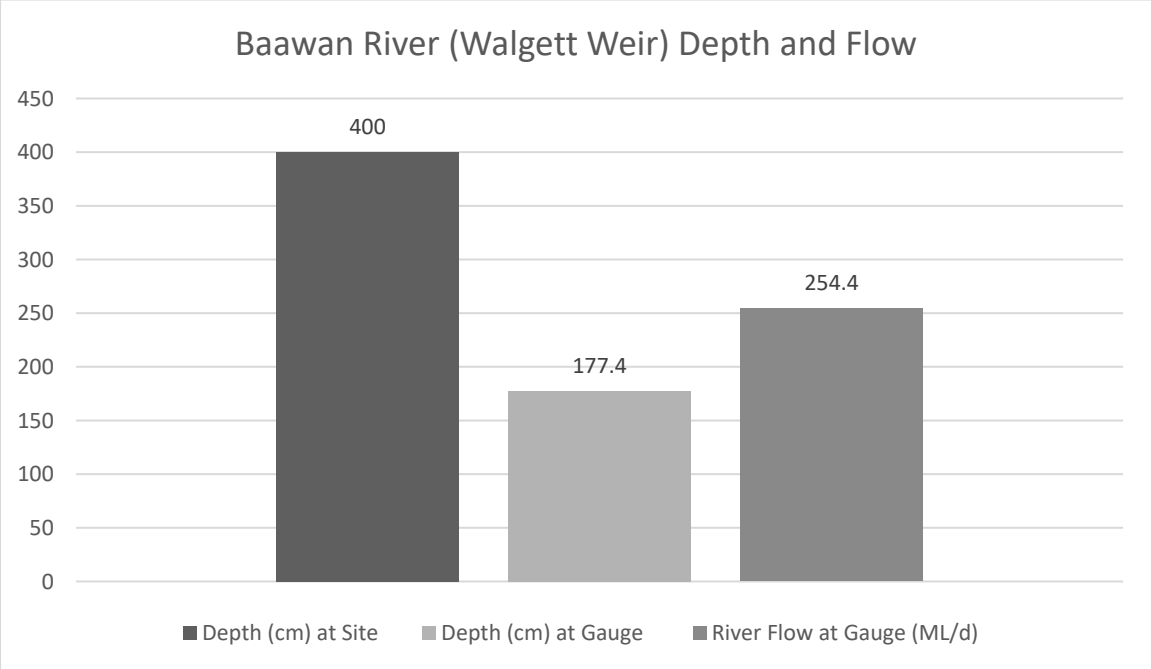
The electrical conductivity is a measurement of salinity. The salinity at site four on the Baawan River is within a good range. This is good for freshwater fish. The EC limits for freshwater fish are between 125 - 2200 uS/cm.

Temperature



The temperature measured at site four are within a good range. This is good for freshwater fish. There are no extreme differences between the temperatures at each depth which means that there is no danger to the fish.

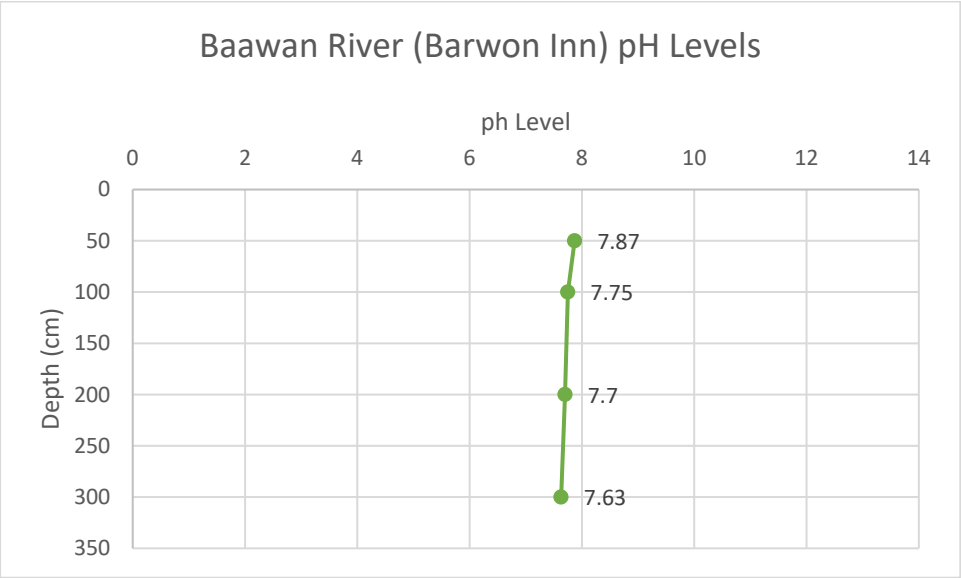
River Depth and Flow



The river depth at both the site and the nearest working gauge (Barwon@Collarenebri 422003) is good for small, medium large fish. The flow at the nearest gauge is within a good range this is good for native fish.

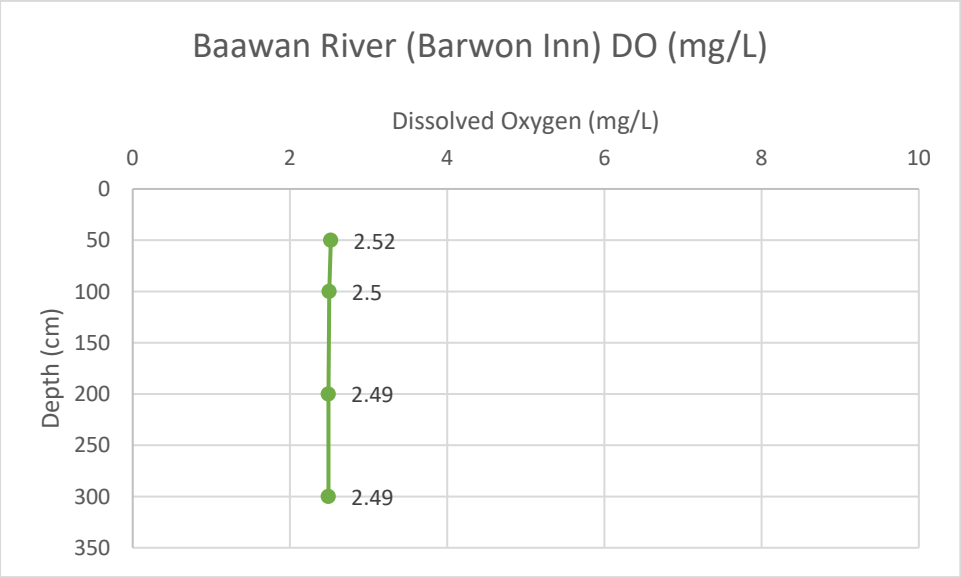
Site Five: Baawan River (Barwon Inn)

pH Level



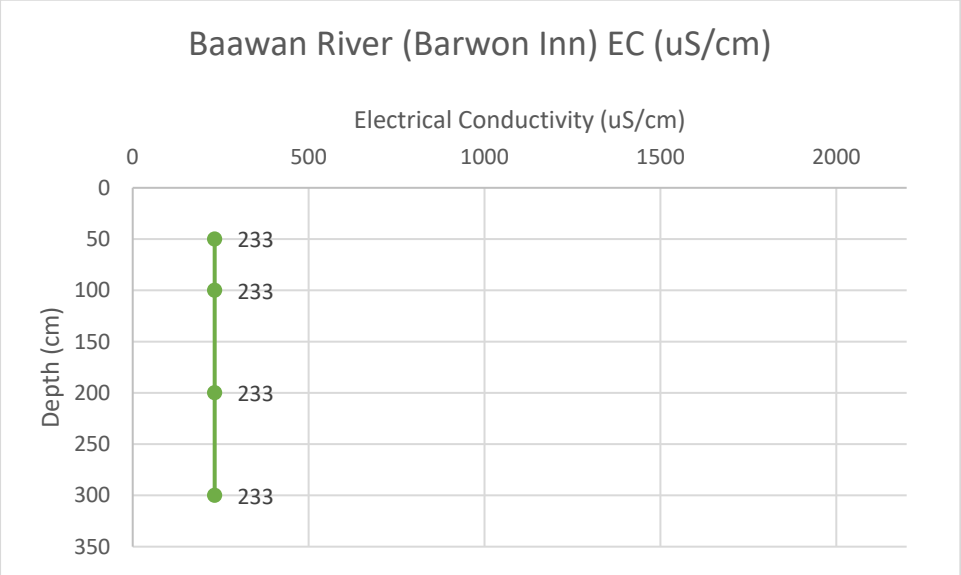
The pH levels at site five are within a good range. This means that the water is not too acidic or too alkaline.

Dissolved Oxygen



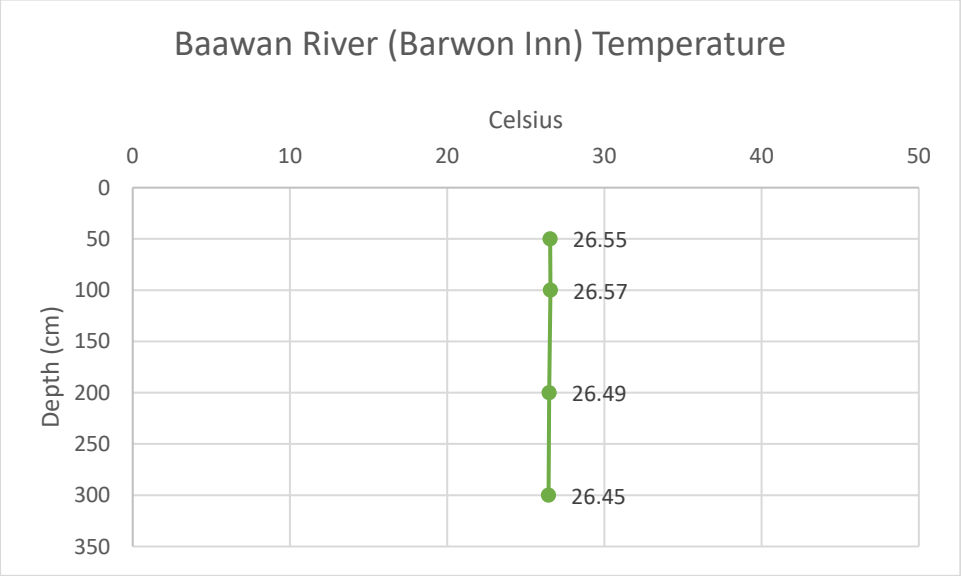
The dissolved oxygen is still at a dangerously low level at site five on the Baawan River. When the dissolved oxygen level is below 3mg/L fish may struggle and may be in a stressful state.

Electrical Conductivity



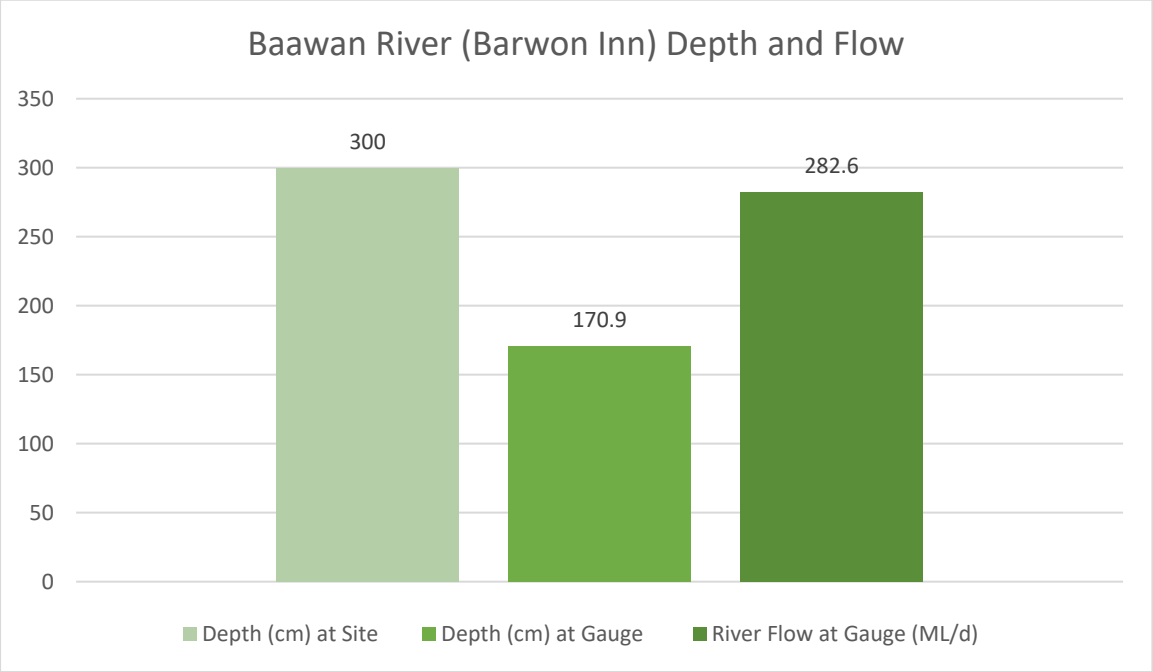
The electrical conductivity is a measurement of salinity. The salinity at site five on the Baawan River is within a good range. This is good for freshwater fish. The EC limits for freshwater fish are between 125 - 2200 uS/cm.

Temperature



The temperature measured at site five are within a good range. This is good for freshwater fish. There are no extreme differences between the temperatures at each depth which means that there is no danger to the fish.

River Depth and Flow



The river depth at both the site and the nearest working gauge (Barwon@Dangar Bridge 422001) is good for small, medium large fish. The flow at the nearest gauge is within a good range this is good for native fish.

Conclusion

The pH levels measured at all depths at all five sites are within a good range. The River water is not too alkaline or too acidic.

The dissolved oxygen at all sites are still at a dangerously low level, all readings of the dissolved oxygen is below 3 mg/L. Below 3 mg/L fish kills can happen.

The electrical conductivity measured at each site at all depths are within a good range. This is good for the freshwater fish.

The temperatures measured at each depth at each site are all within a good range. There is also no extreme changes to the temperature which means there is no danger to the fish.

The river depth at all sites and the nearest working gauge are good for small, medium and large fish. The river flow in the Ngamaay River at the nearest working gauge is not at the expected flow rate. This flow rate could cause health issues for the fish. There is a good river flow rate in the Baawan River.