



# Weekly River Monitoring Report

27th February 2024

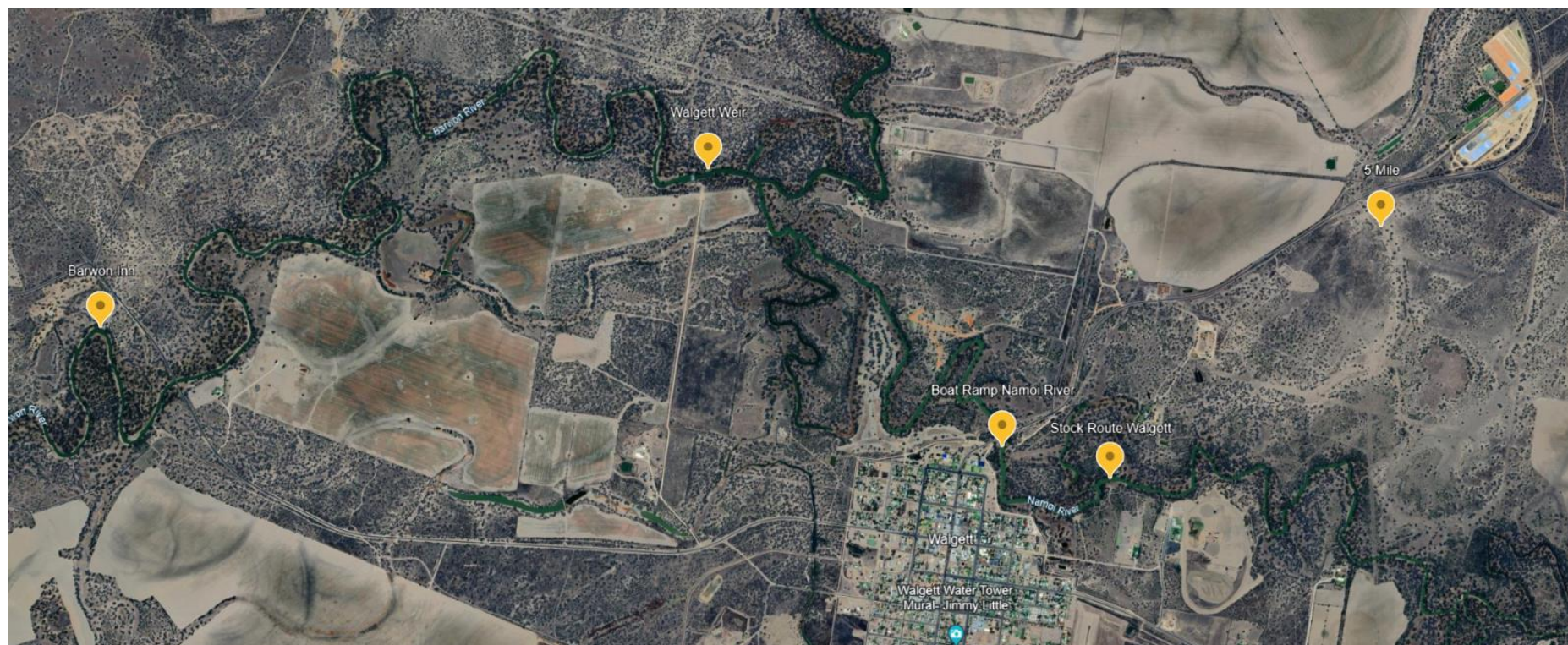
## Introduction

This data was collected on Tuesday 27<sup>th</sup> February 2024 between 10am and 1pm on the Ngamaay (Namoï) 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.

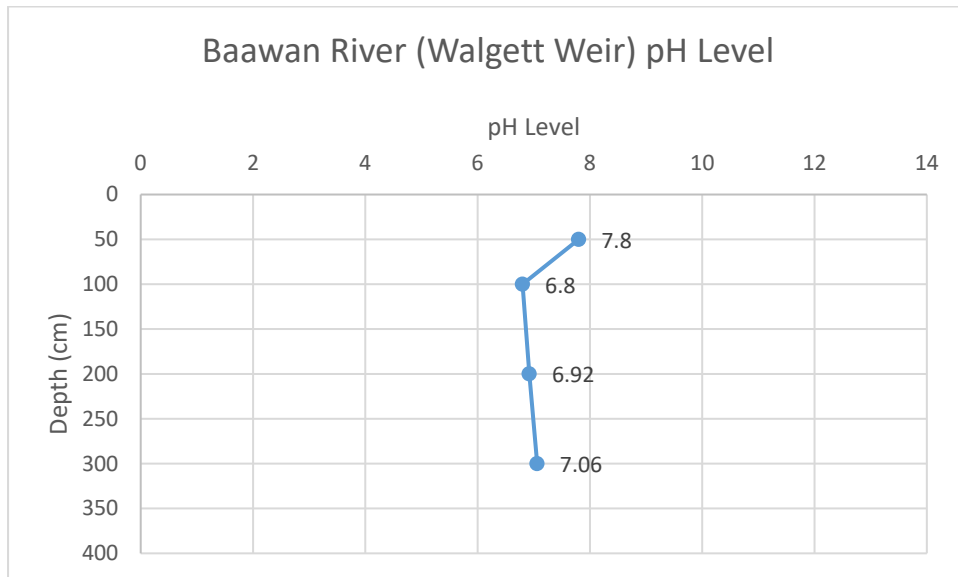


Picture: Map of the Baawan (Barwon) River and Ngamaay (Namoi) River where the DEG River Rangers do their water quality monitoring.



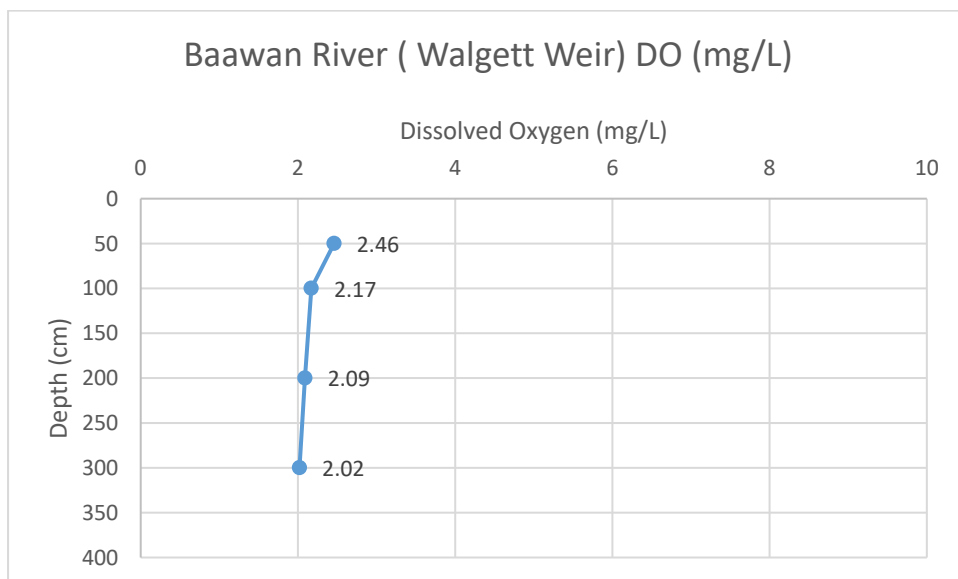
## Site one: Baawan River (Walgett Weir)

### pH Levels



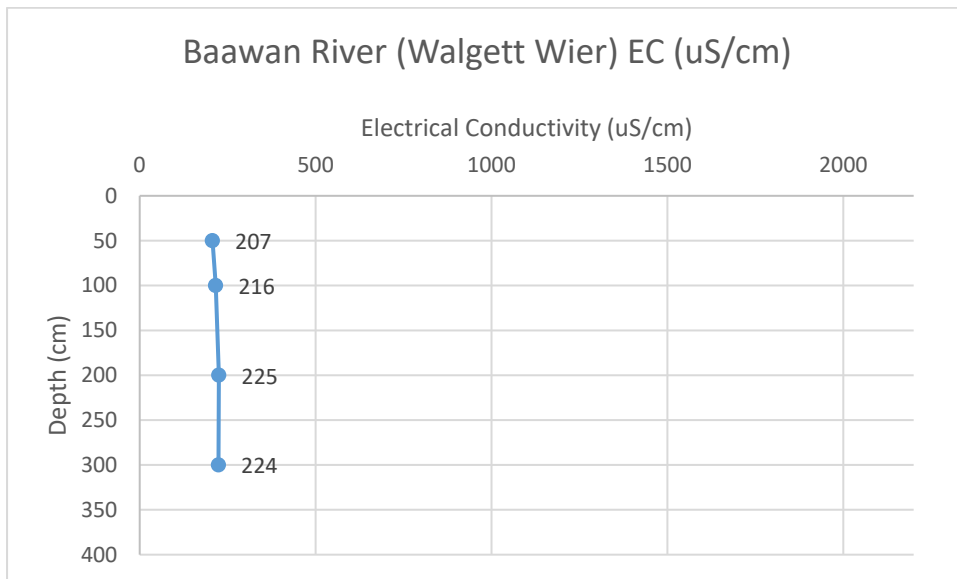
The pH levels at site one on the Baawan River are within a good threshold at all depths measured. This means that the water is not too acidic or alkaline.

### Dissolved Oxygen



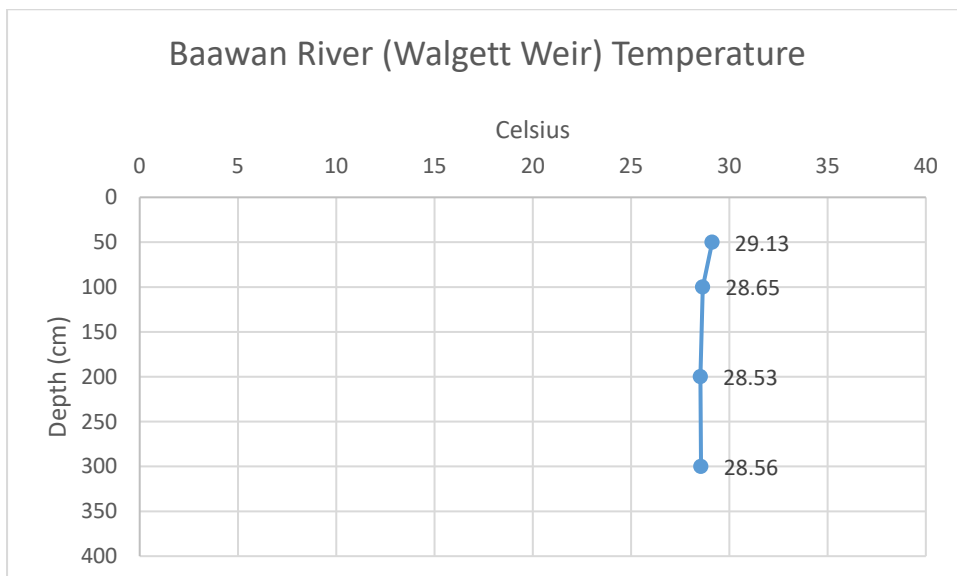
The dissolved oxygen at site one on the Baawan River are at a dangerously low level. When the dissolved oxygen level is below 3mg/L fish may struggle and may be in a stressful state.

## Electrical Conductivity



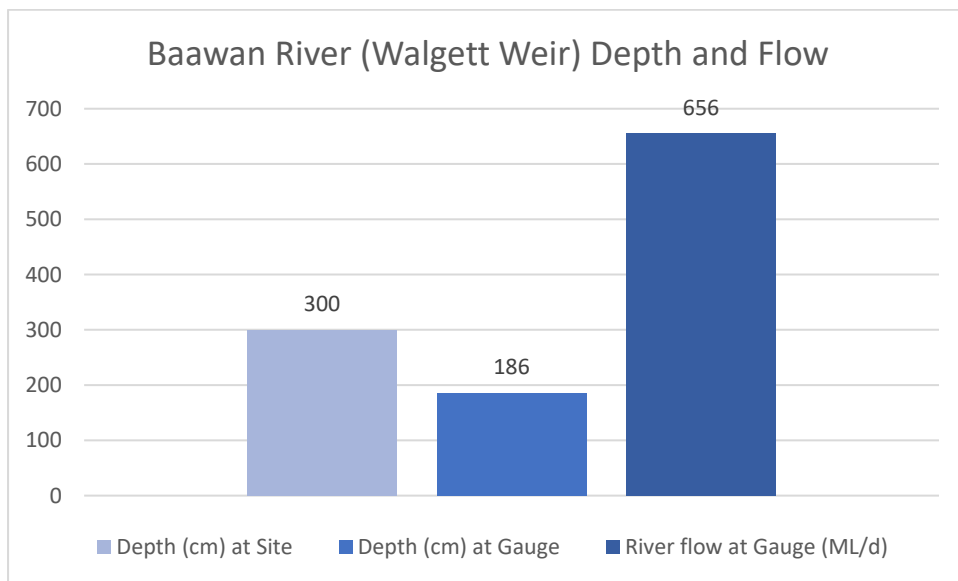
The electrical conductivity is a measurement of the salinity. The salinity at site one on the Baawan River is below the optimal range freshwater fish. The EC limits for freshwater fish are between 125 - 2200 uS/cm.

## Temperature



The temperature measured at each depth is high, but typical for this time of the year. The temperature is still tolerable for freshwater fish. There are no extreme differences between the temperatures at each depth which means that there is no danger to the fish.

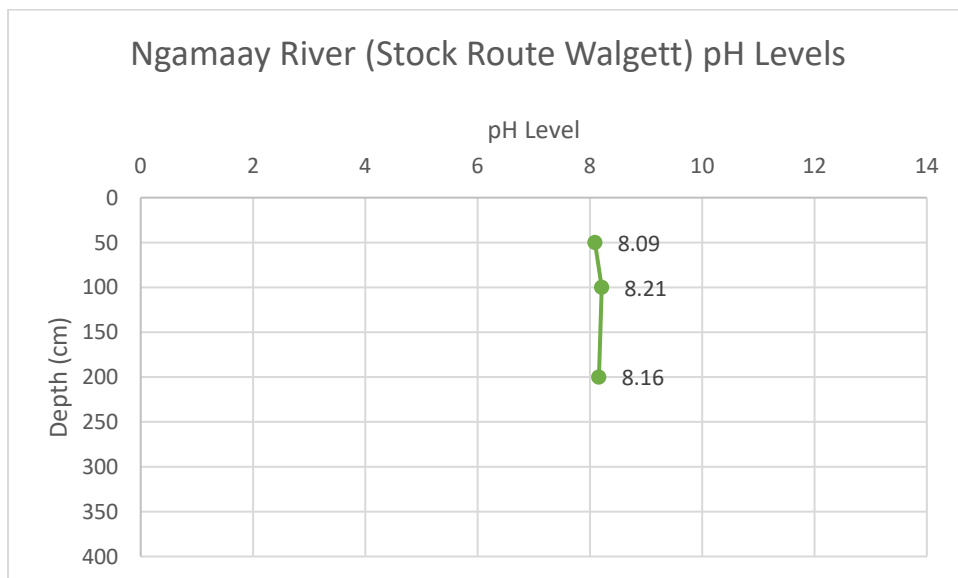
## River Depth and Flow



The river depth at the first site and the nearest working gauge (Barwon@Collarenebri 422003) is good for small, medium and large fish. Native fish prefer flowing water, the flow at the gauge shows that there is a good flow for the fish.

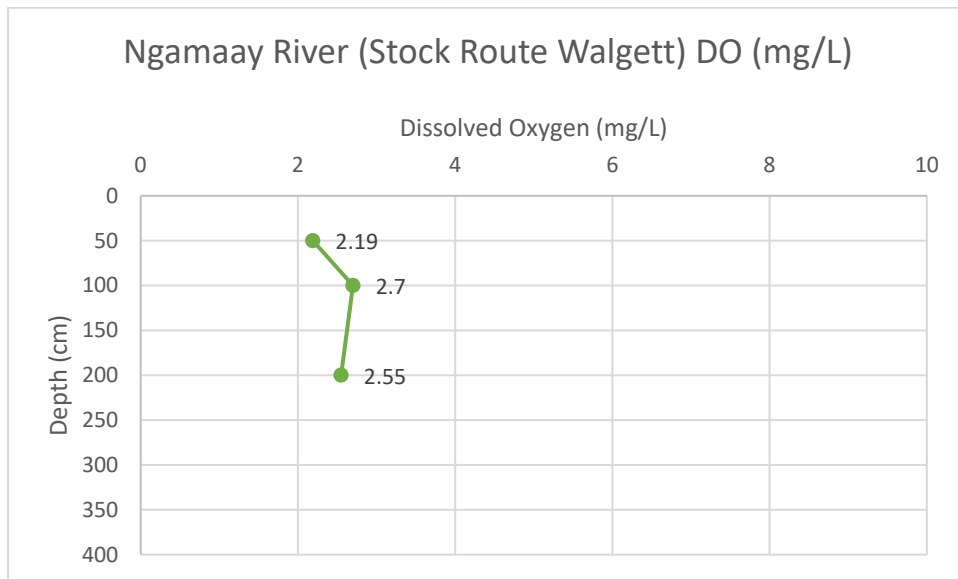
## Site two: Ngamaay River (Stock Route Walgett)

### pH Levels



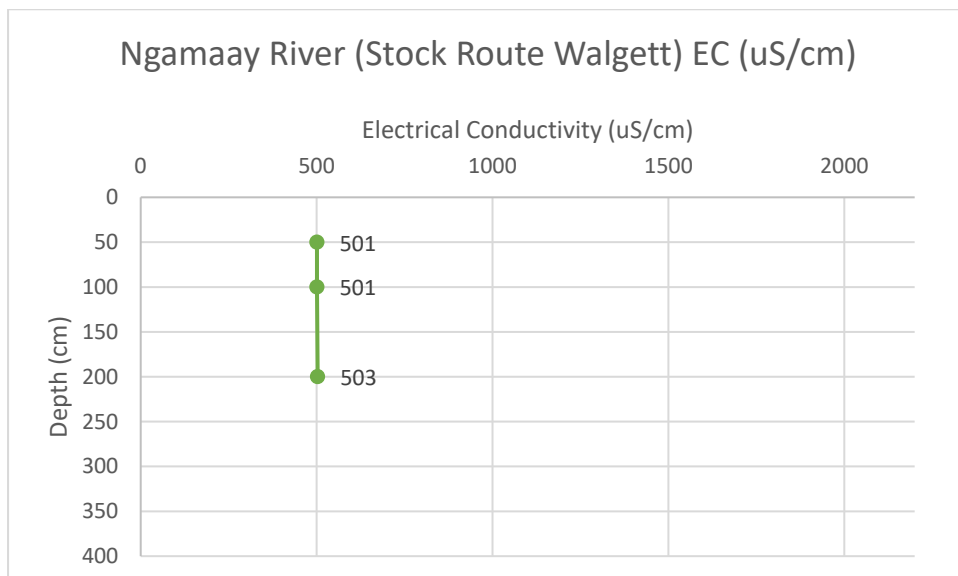
The pH levels at each depth are at a good level. This means that the water is not too alkaline or acidic.

## Dissolved Oxygen



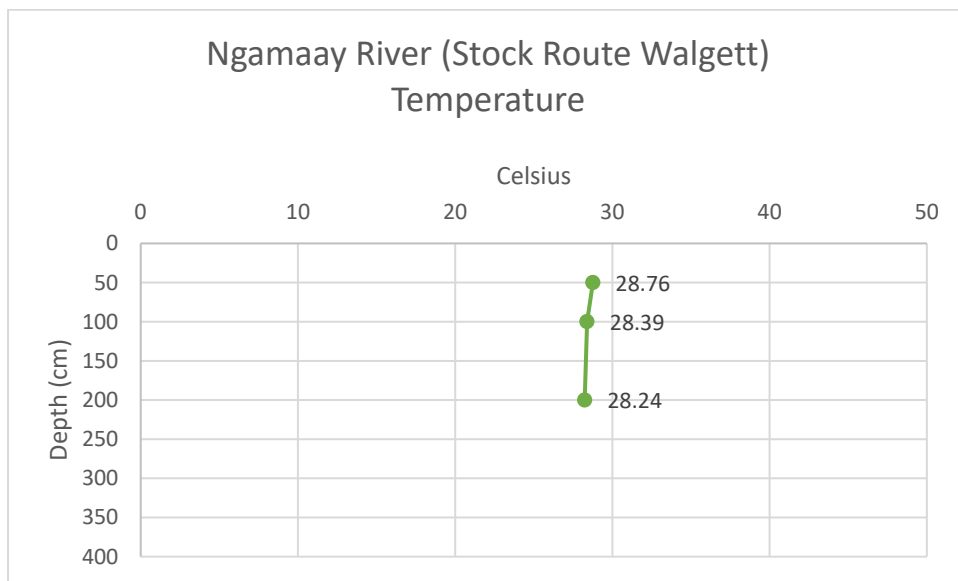
The dissolved oxygen at site two on the Ngamaay River is at a dangerously low level. When the dissolved oxygen level is below 3mg/L fish may struggle and may be in a stressful state.

## Electrical Conductivity



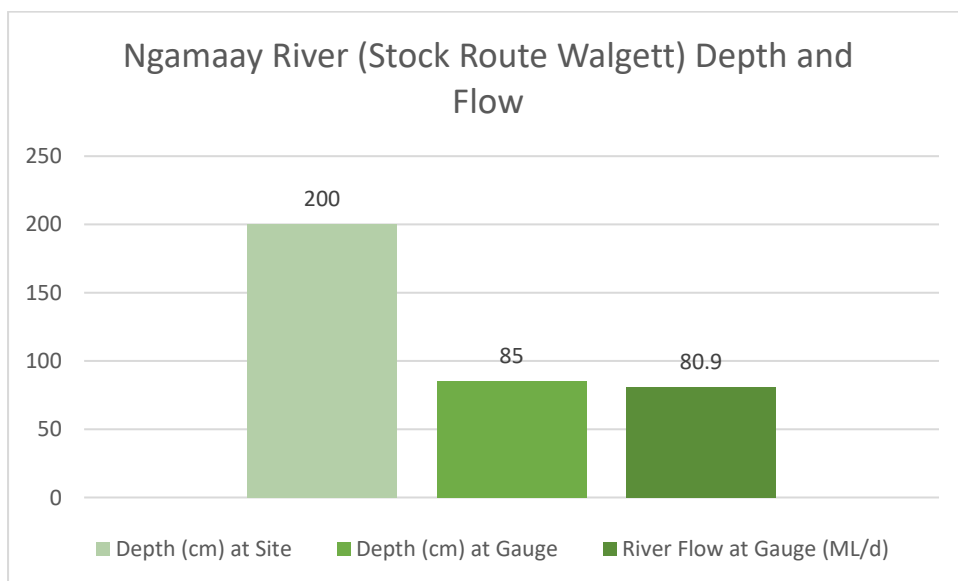
The electrical conductivity is the measurement of salinity. The salinity at site two on the Ngamaay River is within a good range. This is good for freshwater fish.

## Temperature



The temperature measured at each depth is high, but typical for this time of the year. The temperature is still tolerable 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

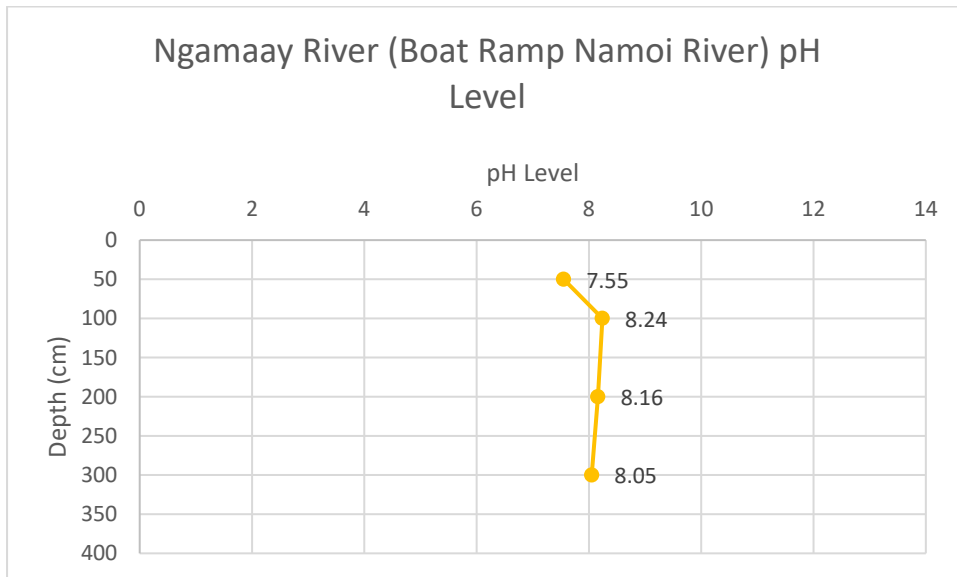


The depth at site and the nearest gauge (Namoio@Goangra 419091) is good for small, medium and large fish. The flow at the gauge is within a concerning threshold since native fish prefer good flows of water this is not great for the fish.



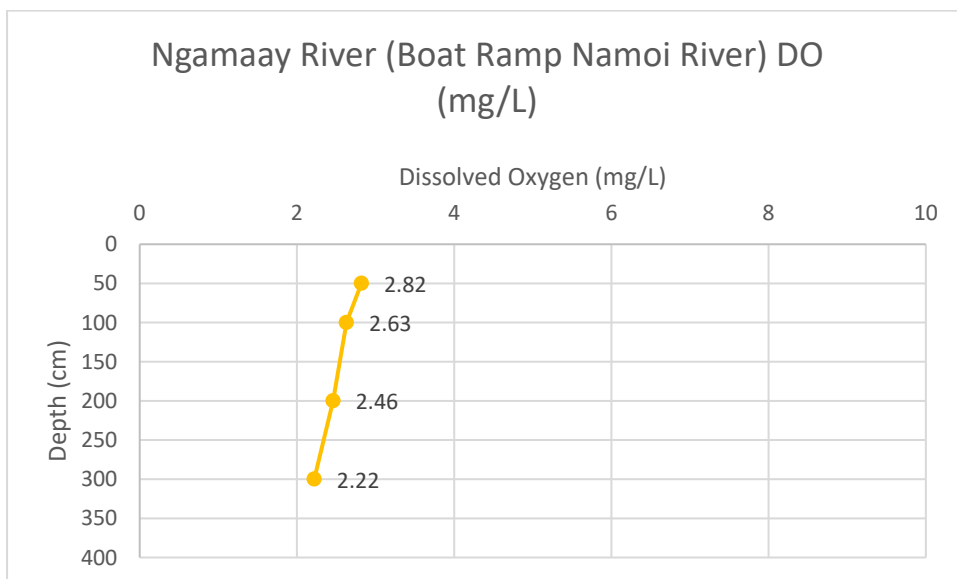
### Site three: Ngamaay River (Boat Ramp Namoi River)

#### pH Levels



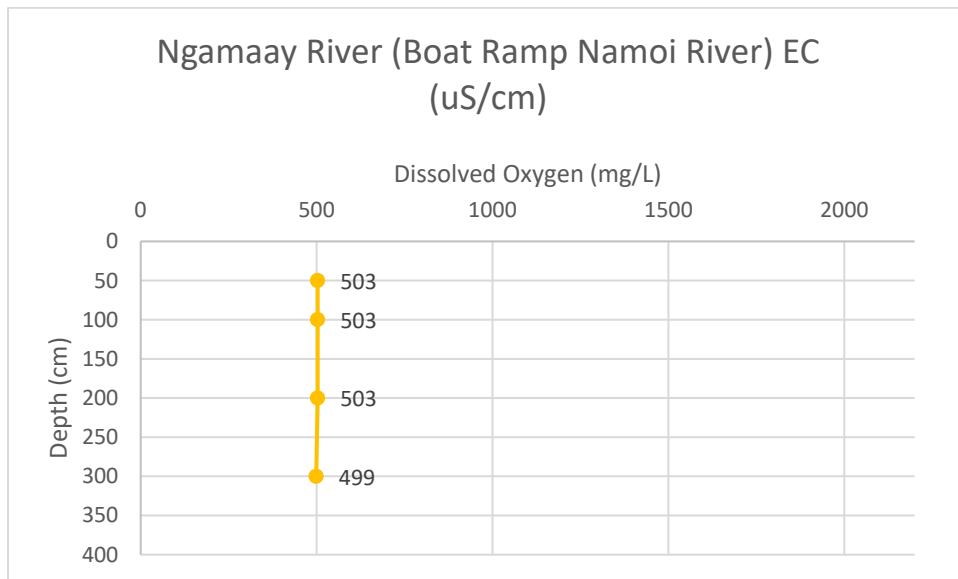
The pH levels at site three are within a good range at each depth measured. This means that the water is not too alkaline or acidic.

#### Dissolved Oxygen



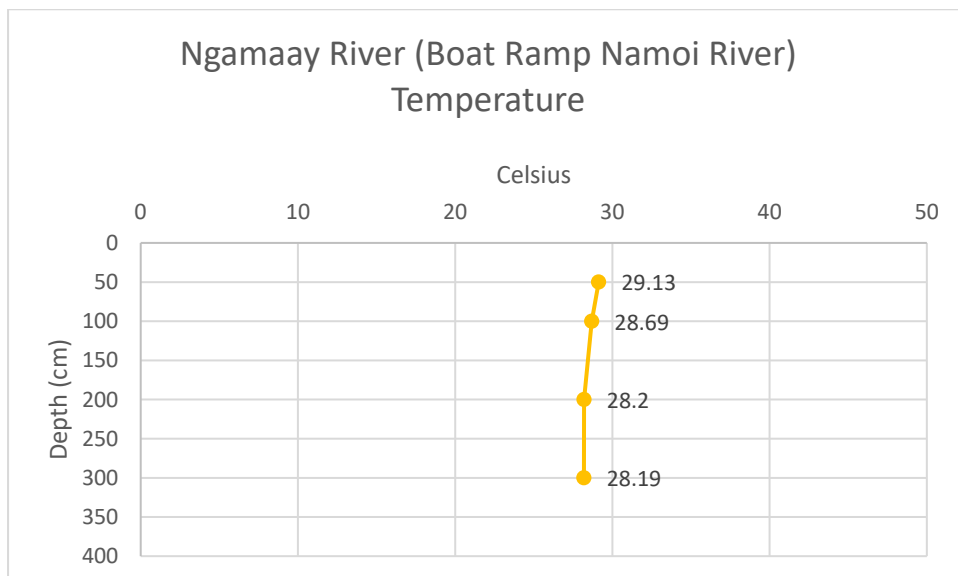
The dissolved oxygen at site two on the Ngamaay River is at a dangerously low level. When the dissolved oxygen level is below 3mg/L fish may struggle and may be in a stressful state.

## Electrical Conductivity



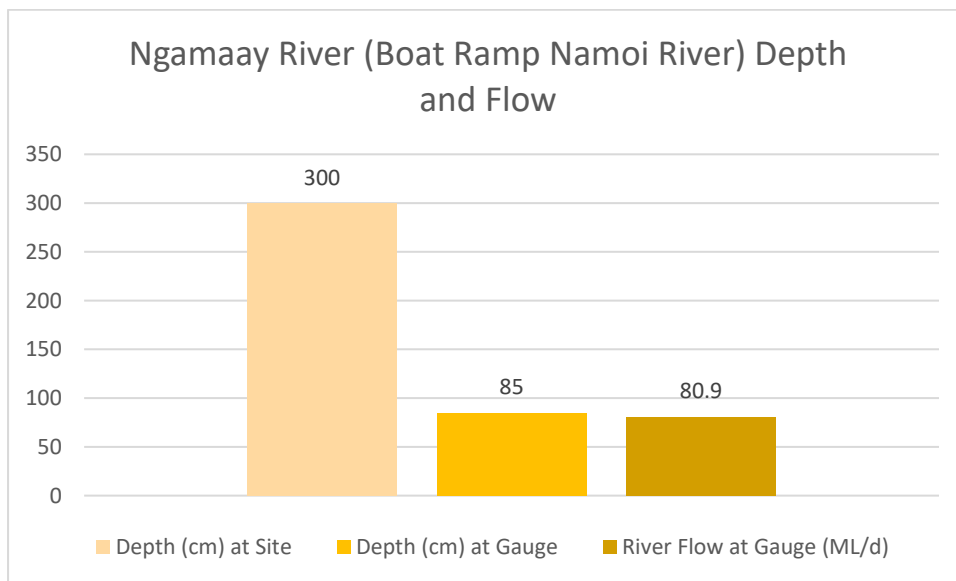
The electrical conductivity is the measurement of salinity. The salinity at site three on the Ngamaay River is within a good range. This is good for freshwater fish.

## Temperature



The temperature measured at each depth is high, but typical for this time of the year. The temperature is still tolerable 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 depth at site and the nearest gauge (Namoi@Goangra 419091) is good for small, medium and large fish. The flow at the gauge is within a concerning threshold since native fish prefer good flows of water this is not great for the fish.

### Overall Conclusion

The pH levels at all sites are within a good range. The dissolved oxygen that has been measured at all sites are all at a dangerously low level. Fish kills happen at levels below 3mg/L.

The electrical conductivity on the Baawan River is slightly below the comfort level for some fish. The EC levels at both sites on the Ngamaay River is within a good range for the fish. The temperature measured at all of the sites at all depths are high and within a concerning range.

The river depth at both the site and the nearest gauge are at good levels for small, medium and large fish. The river flow that has been measured at the nearest gauges show good flows for the Baawan River site for the native fish, but lower and not so good for the two Ngamaay sites.