



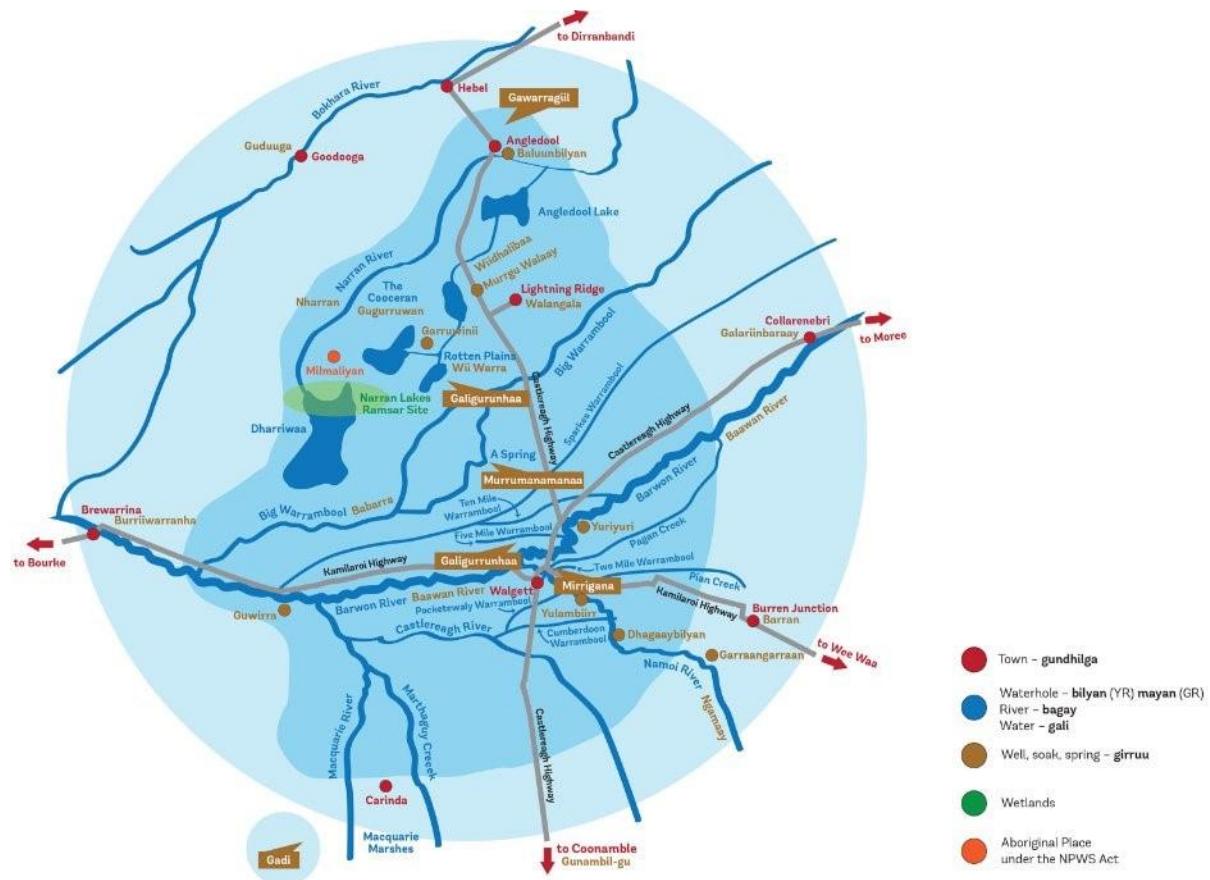
Weekly River Monitoring Report

3rd February 2025

Introduction

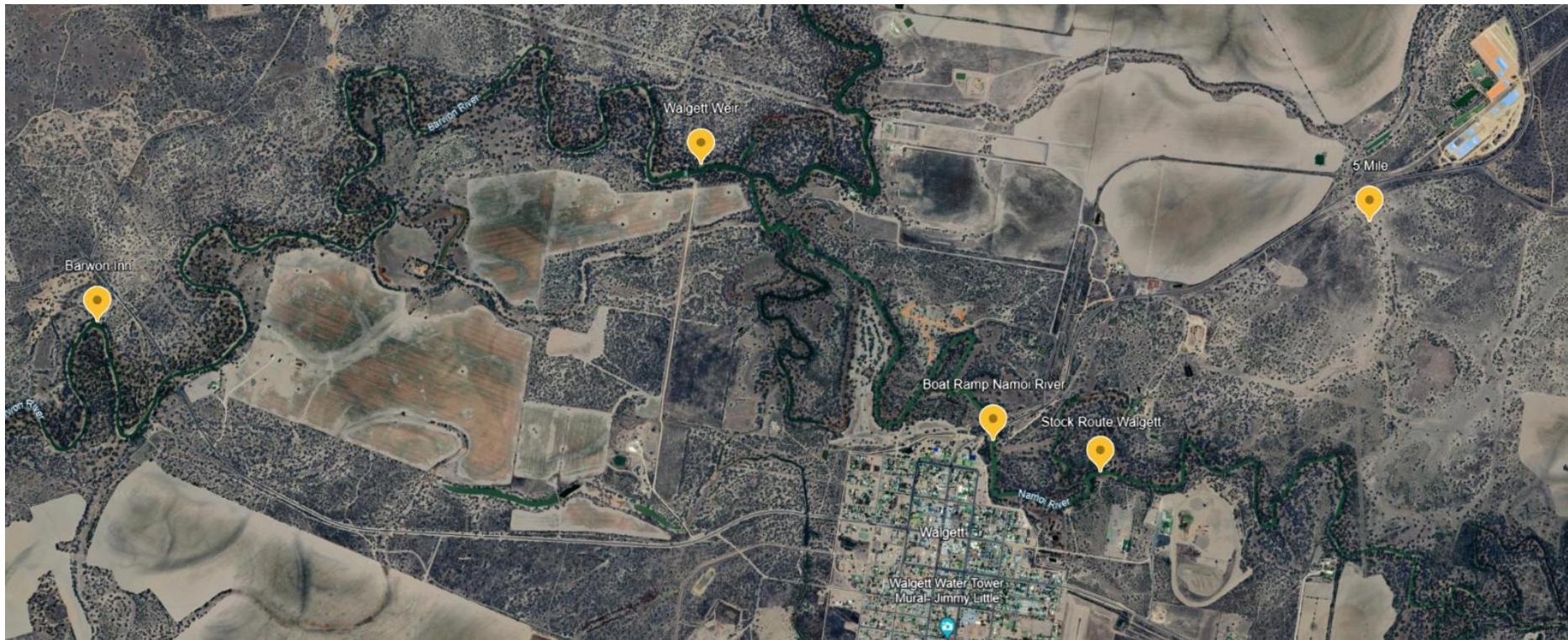
This data was collected on Monday 3rd February between 10am and 1pm on the Ngamaay (Namoi) and Baawan (Barwon) River.

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.

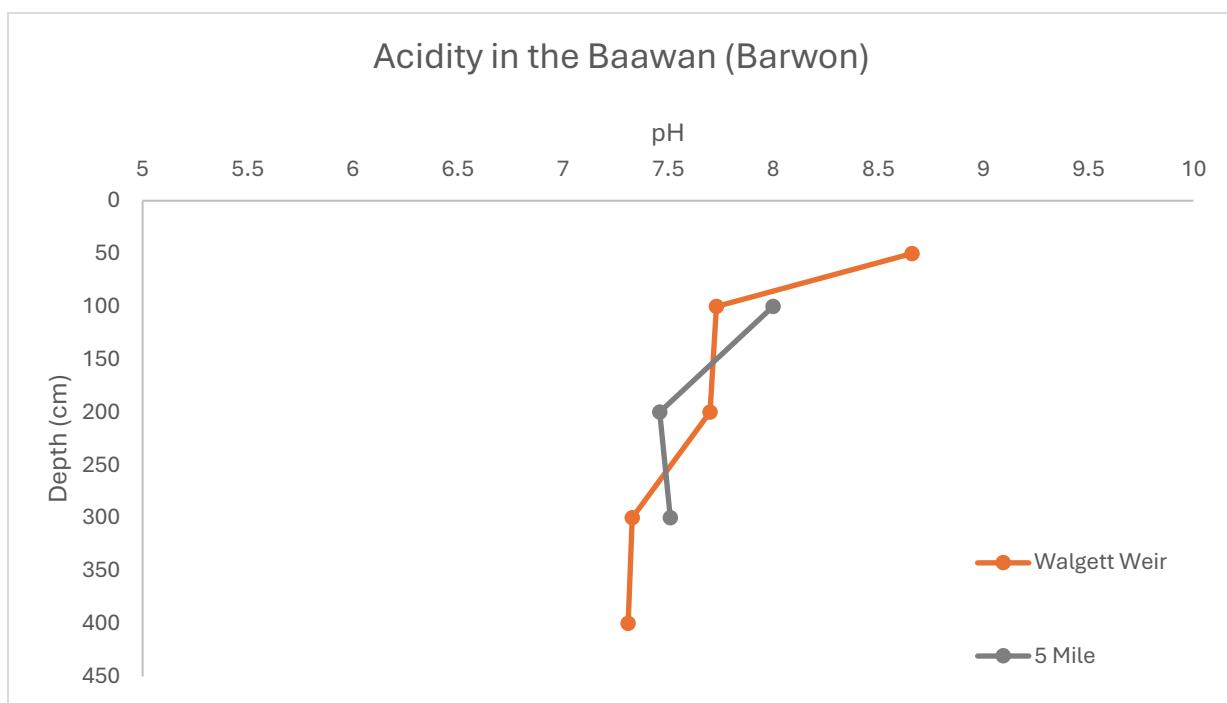
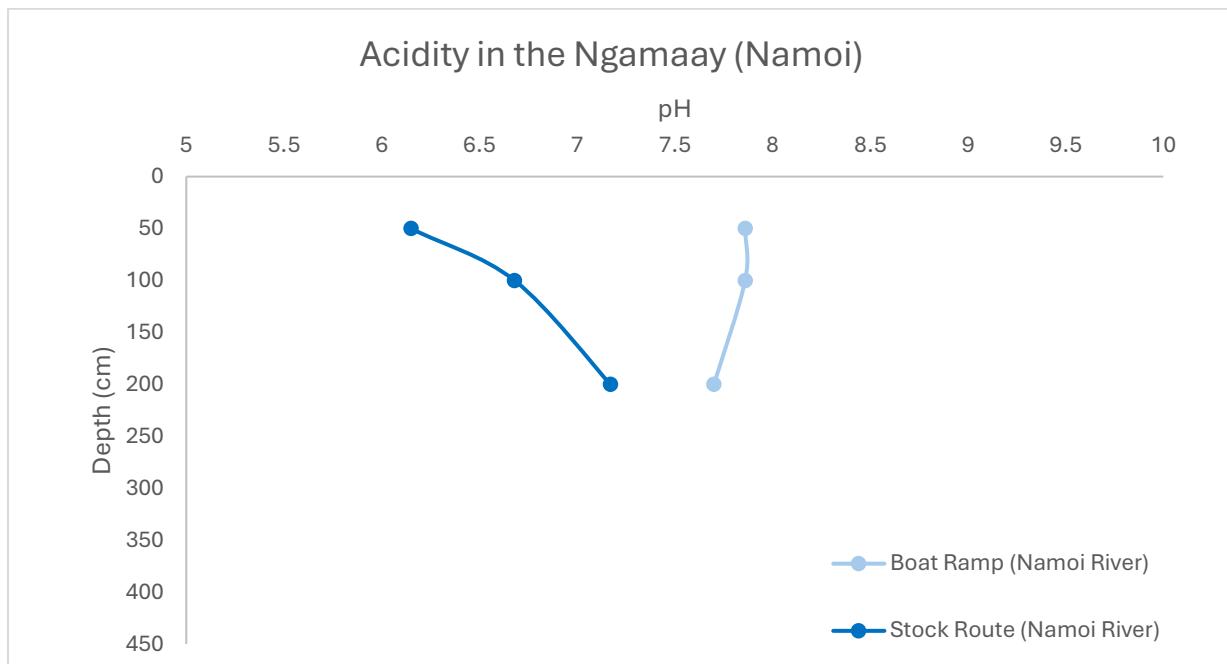


(Picture: Dharriwaa Elders Group area of interest)

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



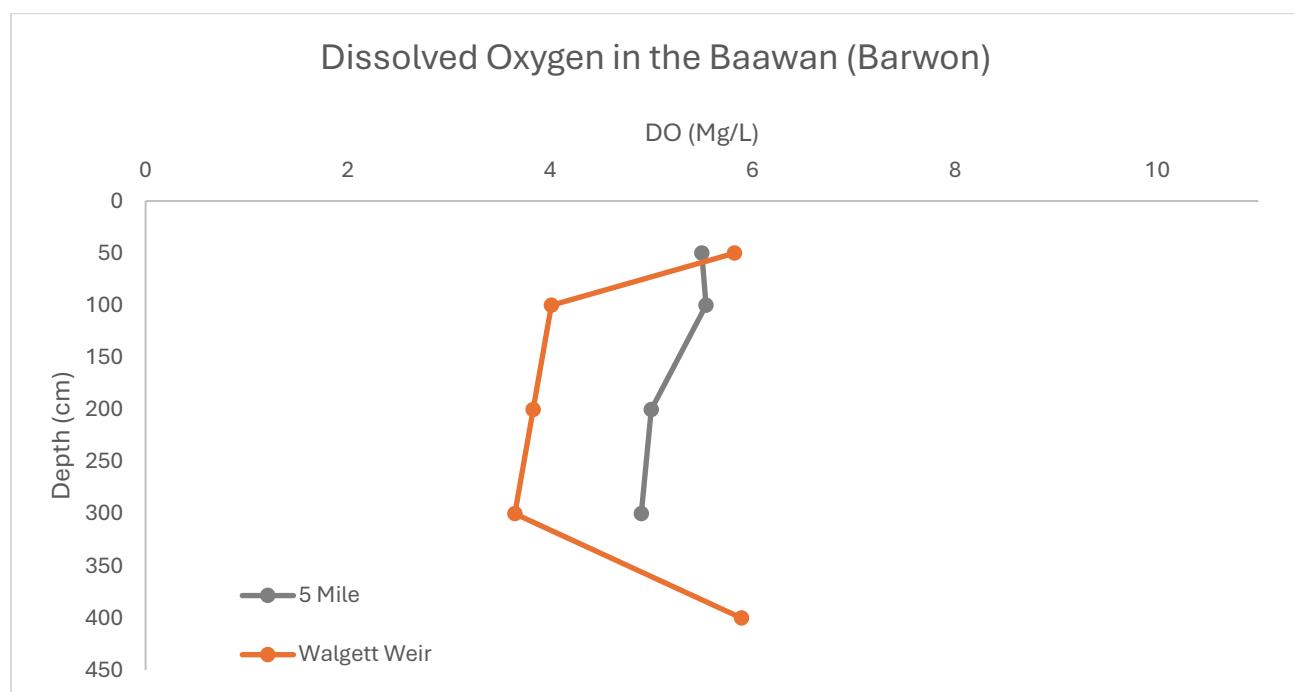
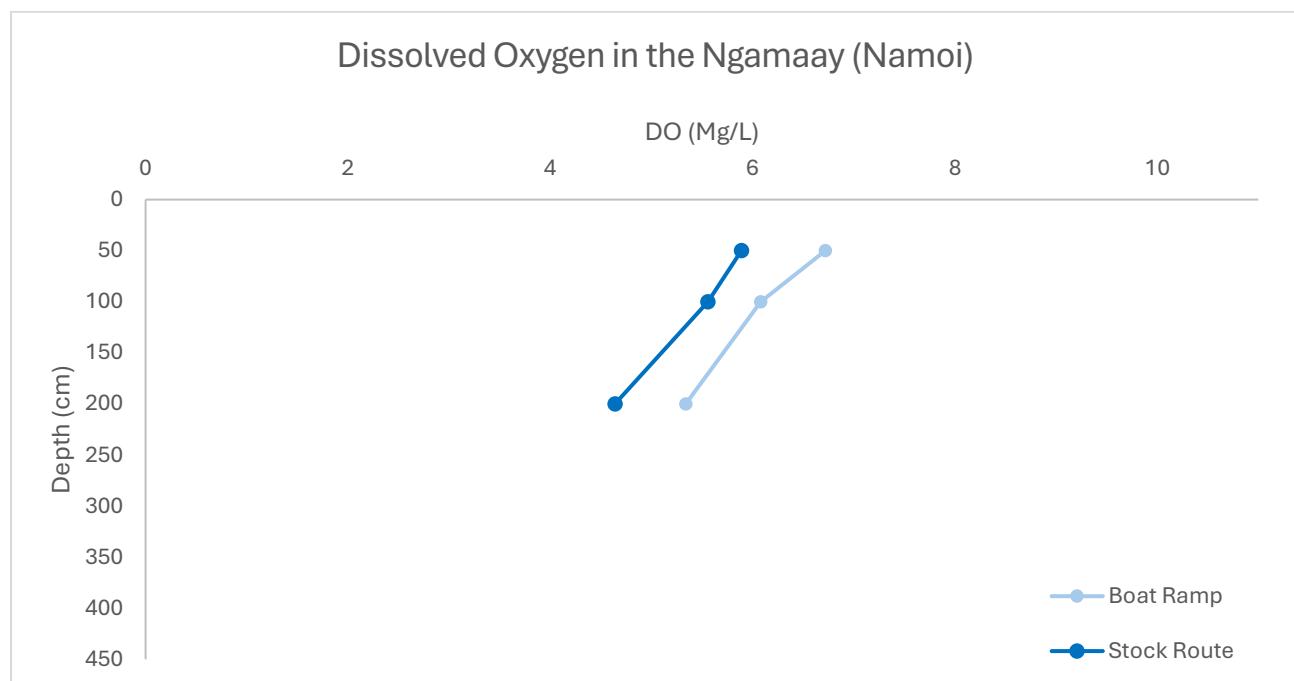
Acidity in the Ngamaay and Baawan Rivers



The pH measured is mostly within a healthy range. The reading at 50cm in the Baawan River at Walgett Weir is slightly outside the healthy range but wouldn't be in danger of causing risk to the species in the river. The 50cm reading at Stock Route on the Ngamaay is slightly lower than the healthy range limit of 6.5 but again is not low enough to cause concern. The minimum reading was 6.15 and the maximum value was 8.66.

Healthy range: 6.5 - 8.5 pH

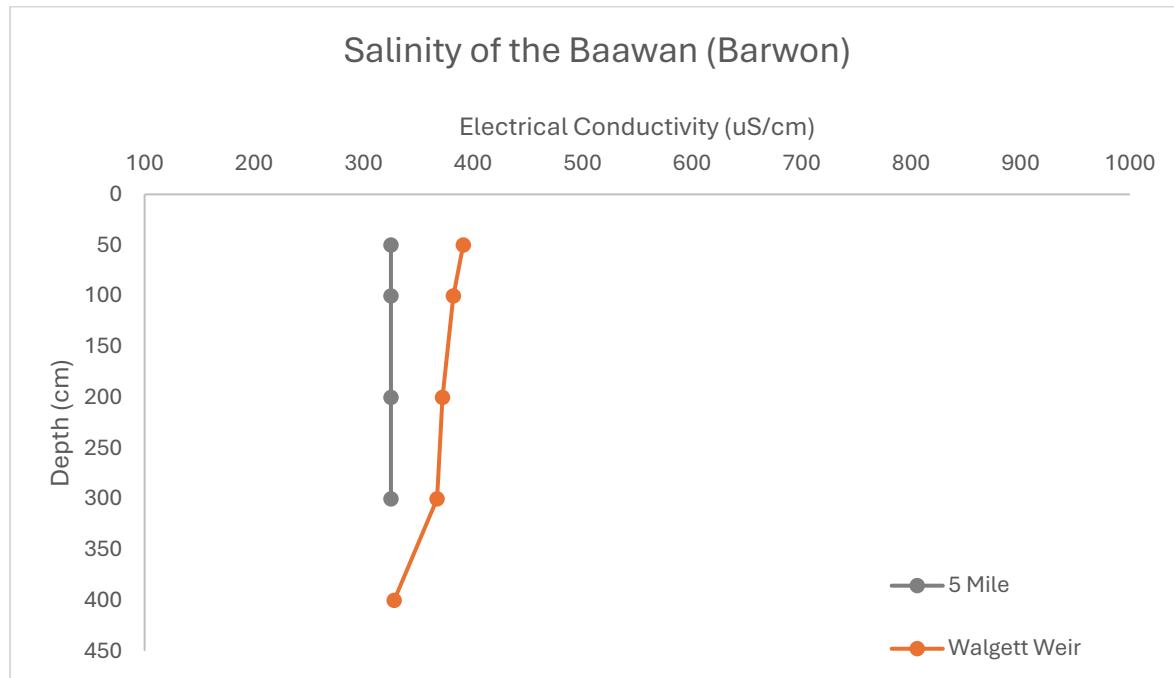
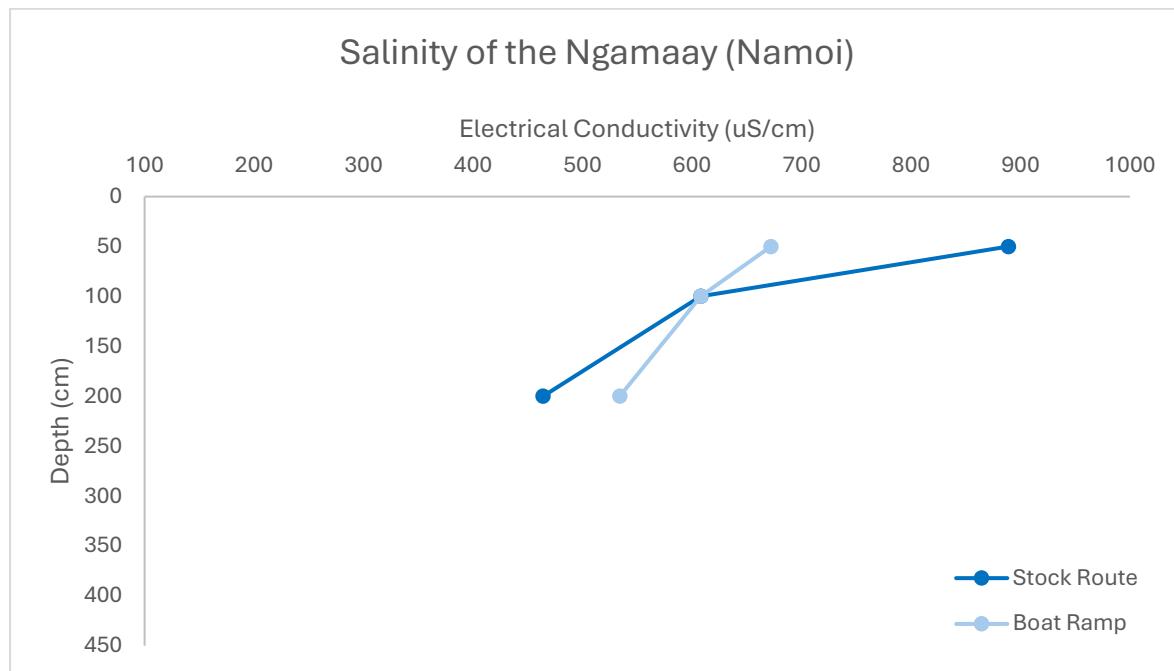
Dissolved Oxygen in the Ngamaay and Baawan Rivers



The dissolved oxygen (mg/L) measured across the sites is mostly outside the healthy range. The minimum reading is 3.65 and the maximum reading is 6.72. Several of the lower readings, especially at the Walgett Weir, should be monitored as native fish would struggle to get enough oxygen in these conditions. Below a reading of 3 is when fish kills can occur, so the sites will be monitored in following weeks to ensure that this does not happen.

Healthy Range: 6 - 8 (Mg/L)

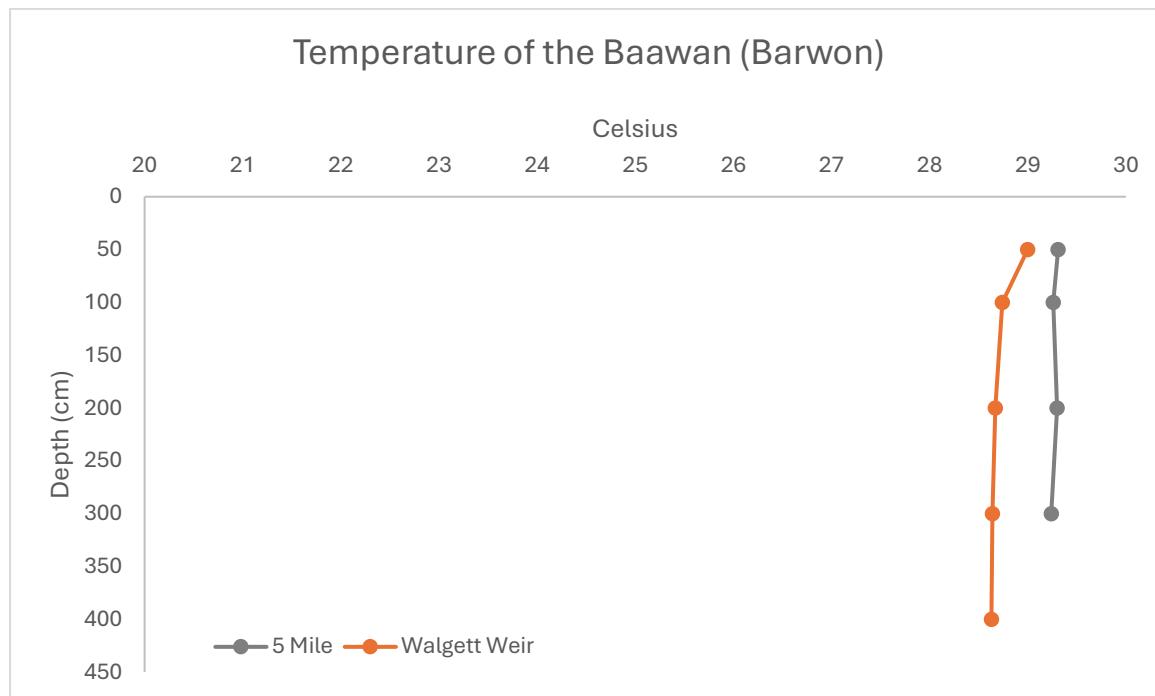
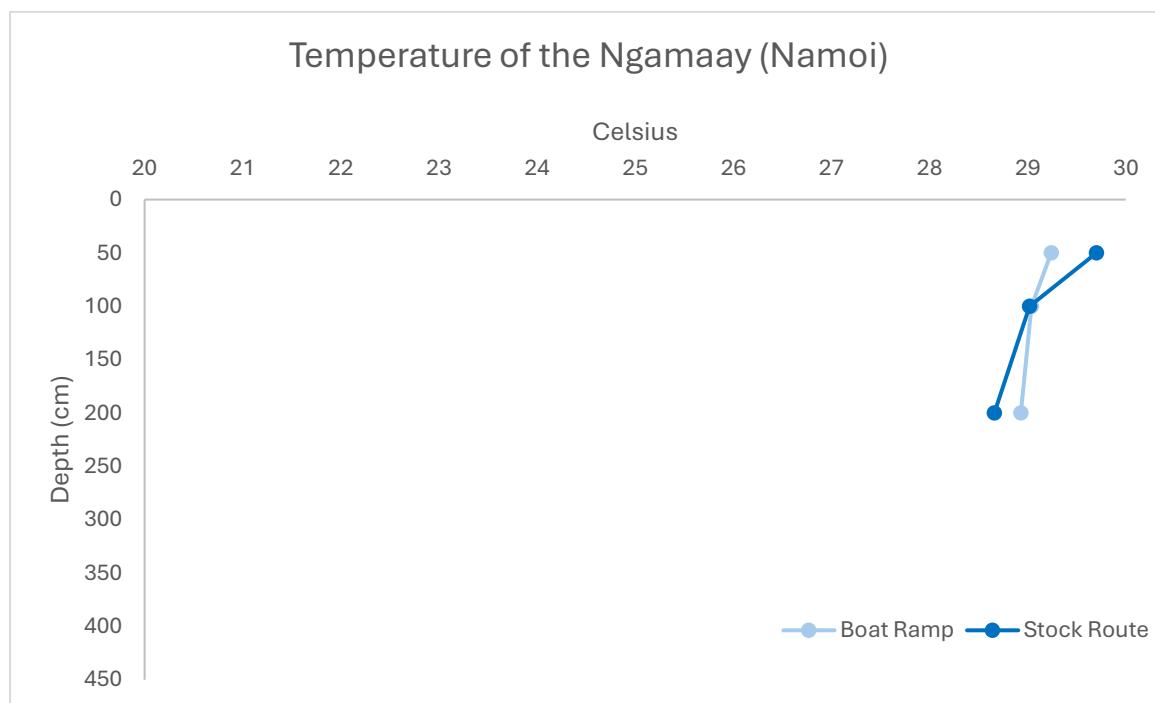
Salinity in the Ngamaay and Baawan Rivers



The salinity in both rivers is within a healthy range. The minimum reading is 325 and the maximum reading is 889.

Healthy Range: 125 - 2,200 uS/cm

Temperature in the Ngamaay and Baawan Rivers



The temperatures measured at all sites are just outside the healthy range. The minimum reading is 28.63 and the maximum reading is 29.7. It is not uncommon for water temperatures to be higher during the summer months, so it is not necessarily a stressful environment for fish, but it will be important to monitor the temperature of the river while the land temperatures are high.

Healthy Range: 18-28 degrees (Celsius)

Conclusion

The pH is within a healthy range at all sites except one at Walgett Weir on the Baawan and one at the Stock Route on the Ngamaay. These temperatures are not far outside the healthy ranges and are not cause for alarm.

The dissolved oxygen is only within the healthy range at one depth on the Boat Ramp site. At the Walgett Weir site the readings get very low, which can indicate that fish will not easily be able to get oxygen. This site in particular should be closely monitored.

The salinity is within a healthy range on both rivers.

The temperatures are all slightly above the healthy range at all sites and depths, but this is a typical response to warmer land temperatures during summer. It is not necessarily a danger to the fish, but during the hotter months the rivers should be closely monitored.