



Department of Biodiversity,  
Conservation and Attractions



Biodiversity and  
Conservation Science

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# Swan Canning Estuary Water Quality Monitoring Project

## Weekly Water Quality Report

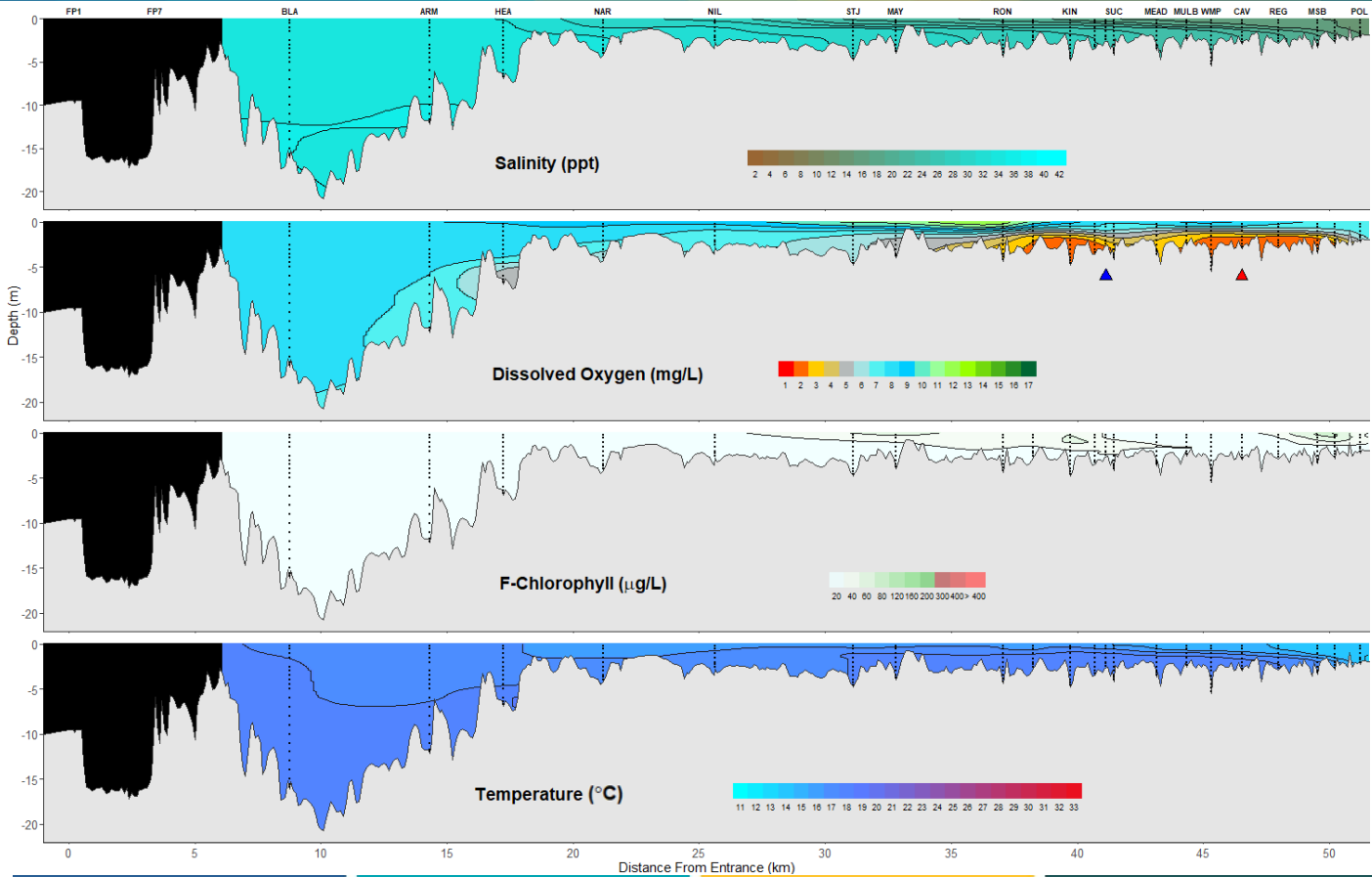
### Lower Swan Canning Estuary to Upper Swan Estuary

29<sup>th</sup> May 2023

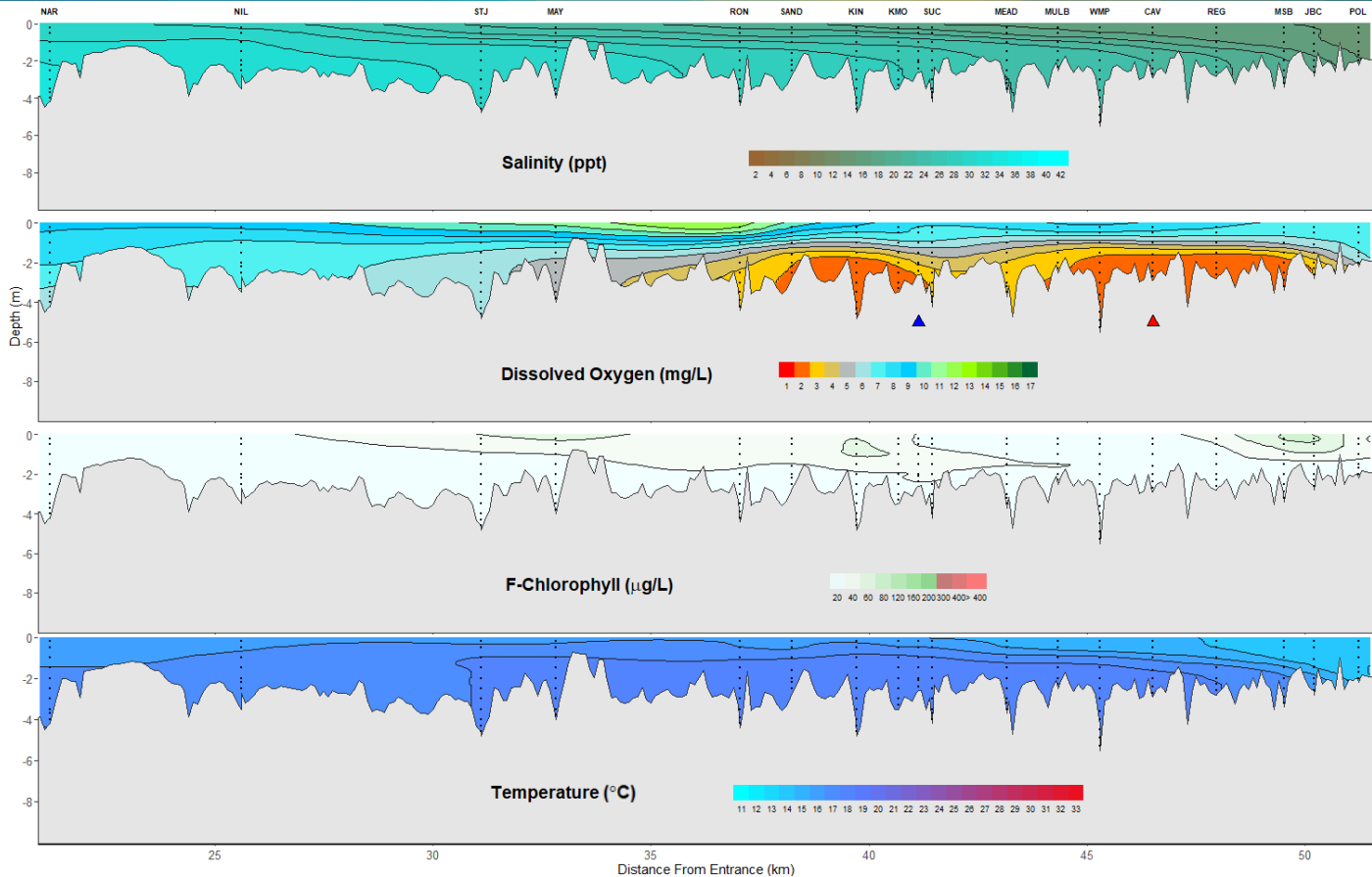
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## Swan Canning Estuary - Water Quality Profiles – 29<sup>th</sup> May 2023



## Swan Canning Estuary - Water Quality Profiles – 29<sup>th</sup> May 2023



Date: 29<sup>th</sup> May 2023

Weather & tide conditions: Conditions were overcast with a predominately north easterly breeze of up to 3.8 knots. The predicted tides at Barrack St were 0.85 m at 1:49 am (low tide) and 1.07 at 10:24 am (high tide). Perth recorded 6.6 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was operable but not triggered to provide oxygen, and the Caversham oxygenation plant was not operable and unable to provide oxygen in the 24 hours prior to sampling due to maintenance.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline, and waters were oxygenated to well oxygenated. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 15.4 °C to 17.9 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL and brackish over saline between STJ and RON. Waters between NIL and MAY, and the surface waters of RON were oxygenated to well oxygenated, while the bottom waters to mid column of RON were low in oxygen. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 15.8 °C to 17.5 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline between SAND and SUC, and brackish from MEAD to POL. Waters were oxygenated to well oxygenated at POL and the surface waters between SAND and JBC, while the bottom waters to mid column varied from hypoxic to low in oxygen between SAND and JBC. Chlorophyll fluorescence was low throughout, except for moderate signals in the surface waters of MSB and JBC. Water temperatures ranged from 13.2 °C to 17.6 °C at the time of sampling.

NB: Profile plots are visual interpolations of measured parameters only. Detailed data are available at [wir.water.wa.gov.au](http://wir.water.wa.gov.au).

**Oxygenation Plant Operational Status:**

- ▲ Operating for part or all of the 24 hours prior to sampling
- ▲ Operable but not triggered to operate in the 24 hours prior to sampling
- ▲ Inoperable for part or all of the 24 hours prior to sampling

**Definitions:**

Salinity – fresh <5, brackish 5-25, saline 25-35, hypersaline >35  
Dissolved oxygen – well oxygenated >6 mg L<sup>-1</sup>, oxygenated >4-6 mg L<sup>-1</sup>, low oxygen >2-4 mg L<sup>-1</sup>, hypoxic 0.5-2 mg L<sup>-1</sup>, anoxic <0.5 mg L<sup>-1</sup>  
Chlorophyll fluorescence (low flow): low < 50 µg L<sup>-1</sup>, moderate 50-150 µg L<sup>-1</sup>, high 150-400 µg L<sup>-1</sup>, extreme > 400 µg L<sup>-1</sup>