



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

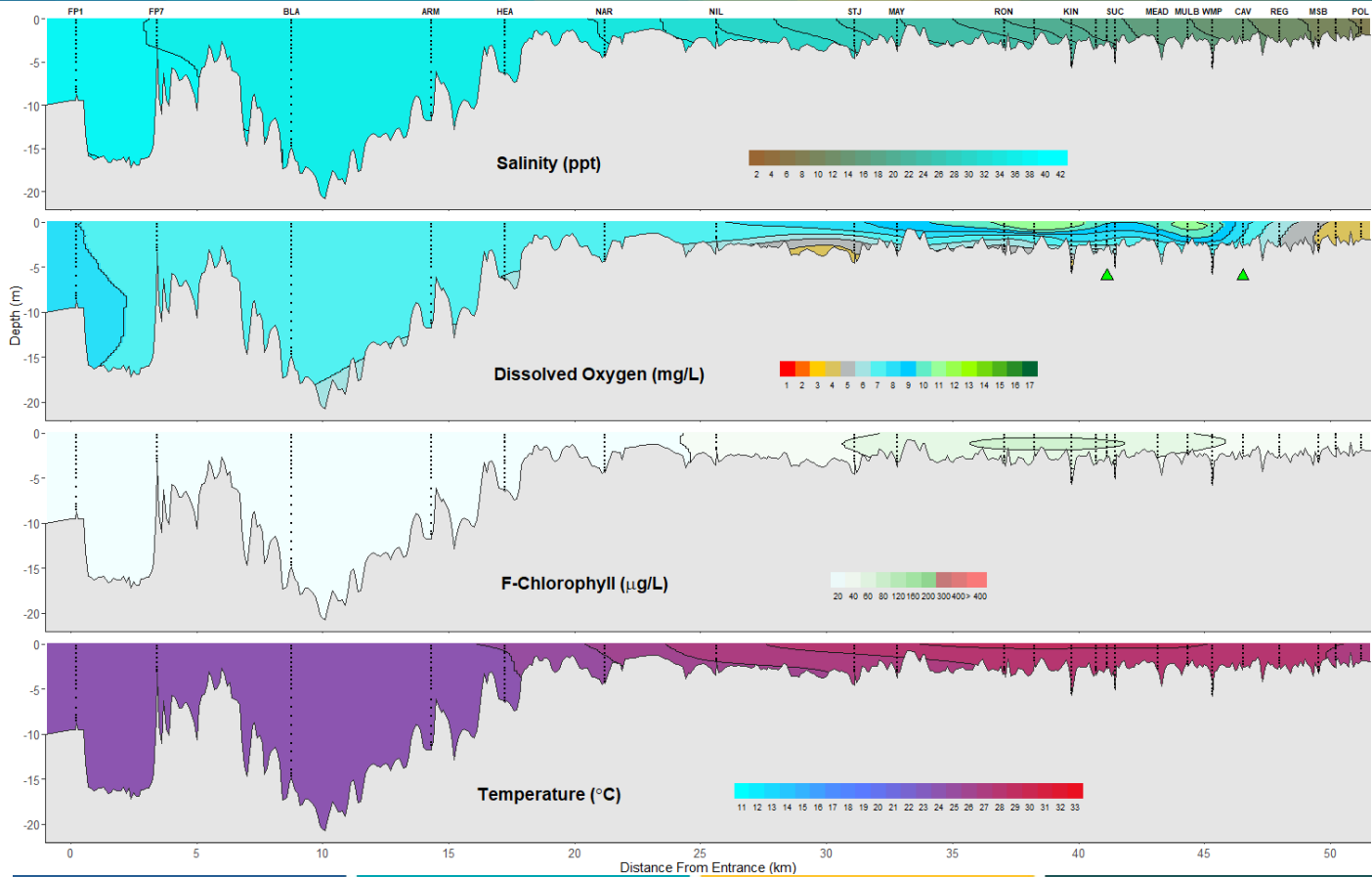
### Lower Swan Canning Estuary to Upper Swan Estuary

18<sup>th</sup> December 2023

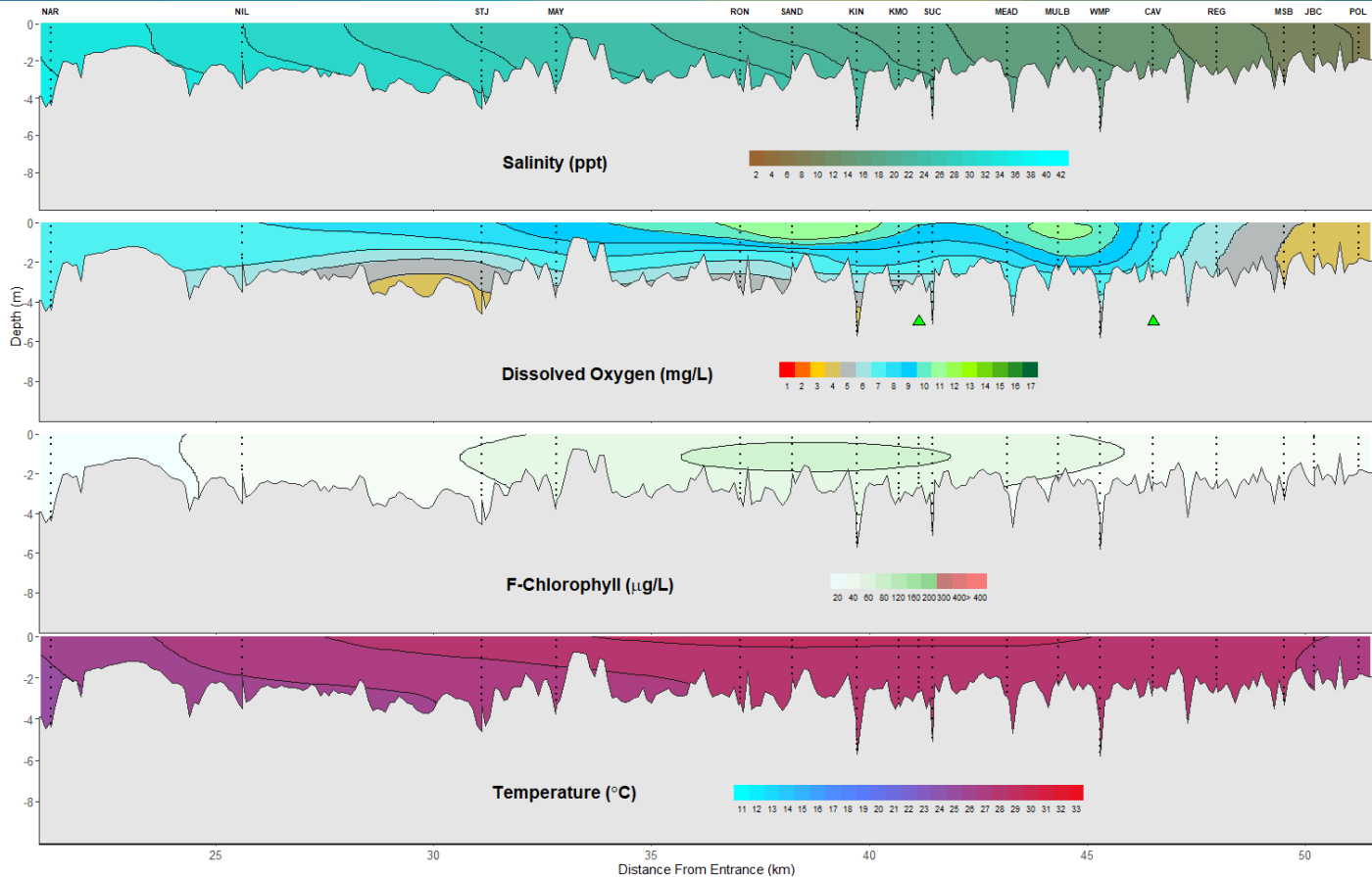
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## Swan Canning Estuary - Water Quality Profiles – 18<sup>th</sup> December 2023



## Swan Canning Estuary - Water Quality Profiles – 18<sup>th</sup> December 2023



Date: 18<sup>th</sup> December 2023

Weather & tide conditions: Conditions were sunny with an easterly breeze of up to 10.4 knots. The predicted tides at Barrack St were 1.03 m at 1:17 am (high tide) and 0.57 m at 12:16 pm (low tide). Perth recorded no rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were triggered to provide oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline from BLA to NAR. Waters were oxygenated to well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 23.3 °C to 25.2 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline throughout NIL to STJ, brackish over saline bottom waters at MAY, and brackish throughout at RON. Bottom waters of STJ were low in oxygen and all other sites were oxygenated to well oxygenated. Chlorophyll fluorescence was moderate in subsurface and bottom waters from STJ to RON. Water temperatures ranged from 25.9 °C to 28.1 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary waters were brackish. Bottom and subsurface waters were low in oxygen at KIN, KMO and from MSB to POL. The remainder of sites were oxygenated to well oxygenated. Chlorophyll fluorescence was moderate in surface and mid-waters from MEAD to KIN, and high in subsurface waters of SAND. Water temperatures ranged from 26.6 °C to 28.6 °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 (mod/high 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>