



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

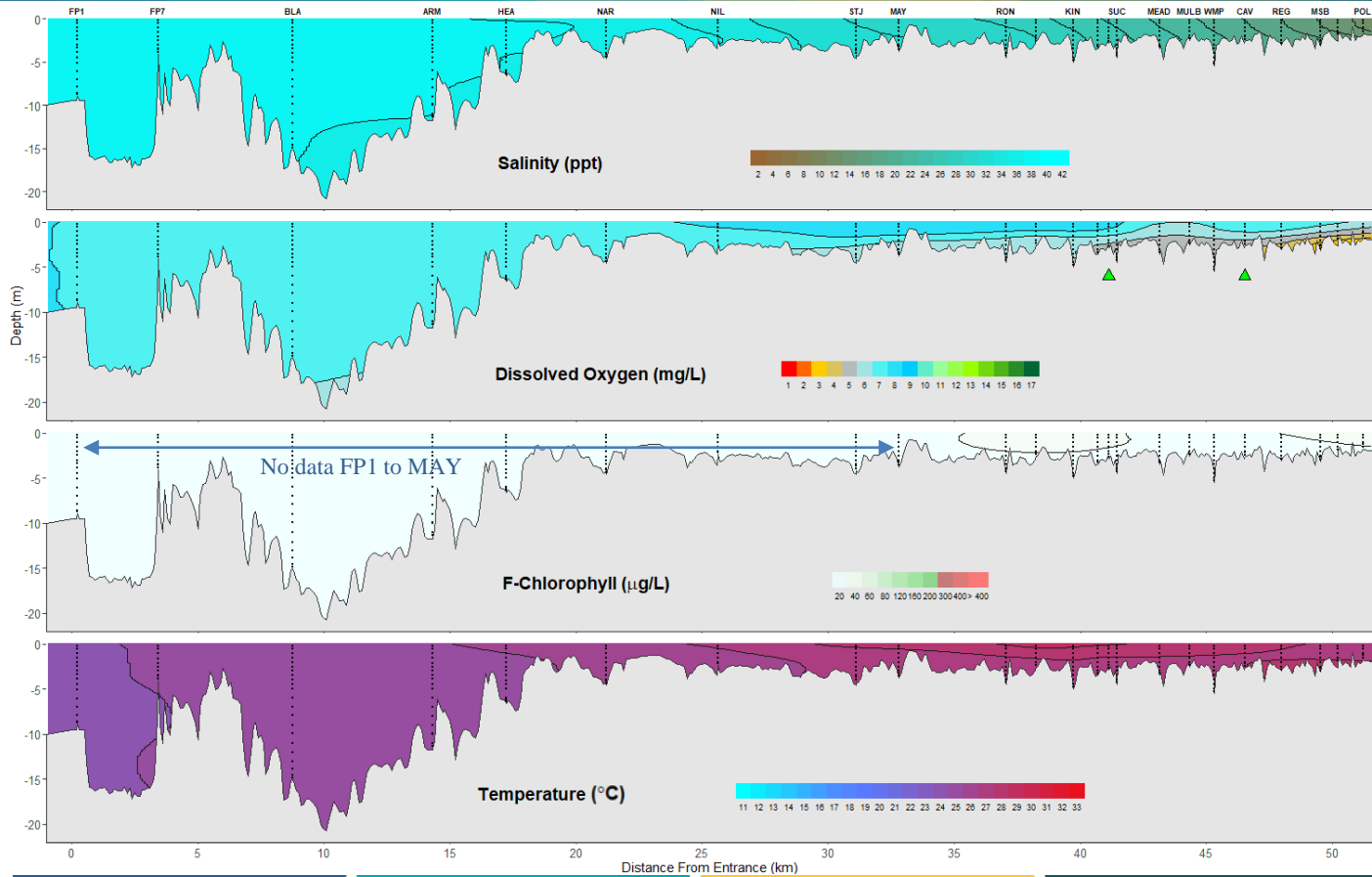
### Lower Swan Canning Estuary to Upper Swan Estuary

13<sup>th</sup> February 2023

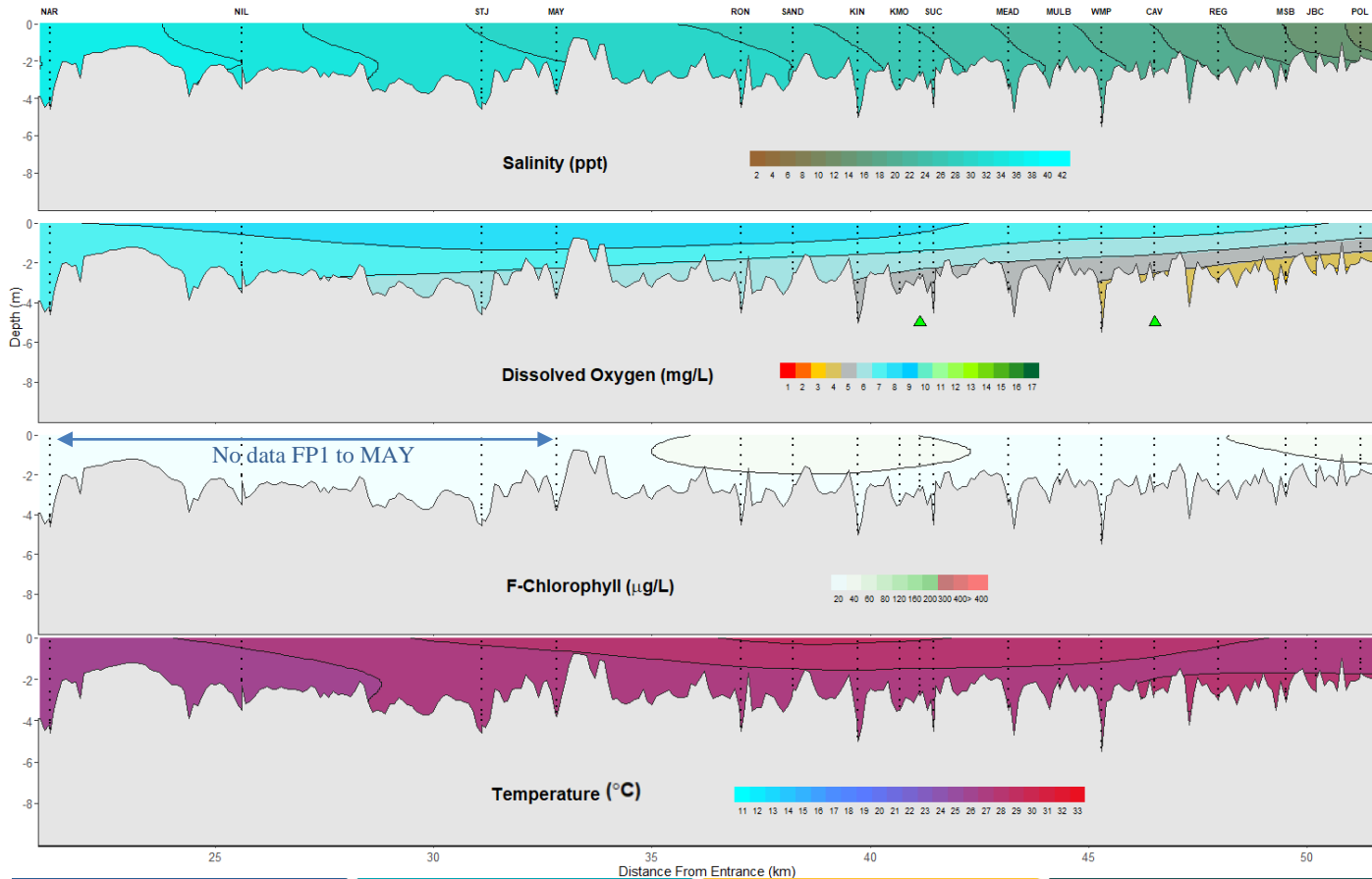
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## Swan Canning Estuary - Water Quality Profiles - 13<sup>th</sup> February 2023



## Middle and Upper Swan Estuary - Water Quality Profiles – 13<sup>th</sup> February 2023



**Date:** 13<sup>th</sup> February 2023

**Weather & tide conditions:** Conditions were sunny with a variable easterly breeze of up to 6.4 knots. The predicted tides at Barrack St were of 0.64 m at 6:59 am (low tide) and 1.05 m at 4:33 pm (high tide) . Perth recorded no rainfall in the week prior to sampling (Bureau of Meteorology).

**Oxygenation:** The Guildford and Caversham oxygenation plants were both operable and providing oxygen in the 24 hours prior to sampling.

**Lower Swan Canning Estuary (FPI to NAR):** The Lower Swan Canning Estuary was hypersaline and well oxygenated throughout. Chlorophyll fluorescence was not recorded in the lower parts of the estuary. Water temperatures ranged from 23.7 °C to 25.4 °C at the time of sampling.

**Middle Swan Estuary (NIL to RON):** The Middle Swan Estuary was saline, and waters were oxygenated or well oxygenated throughout. Chlorophyll fluorescence was not recorded between NIL and MAY, while signals were low at RON. Water temperatures ranged from 25.5 to 27.6 °C at the time of sampling.

**Upper Swan Estuary (SAND to POL):** The Upper Swan Estuary was saline between SAND and KIN, brackish over saline between KMO and SUC and brackish from KIN to POL. Surface waters were oxygenated or well oxygenated throughout while the bottom waters of SAND, KMO, MULB, WMP, MSB and JBC were low in oxygen. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 26.0 °C to 29.0 °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). Chlorophyll fluorescence was unable to be measured in the lower and parts of the middle Swan Estuary.

**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>