



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

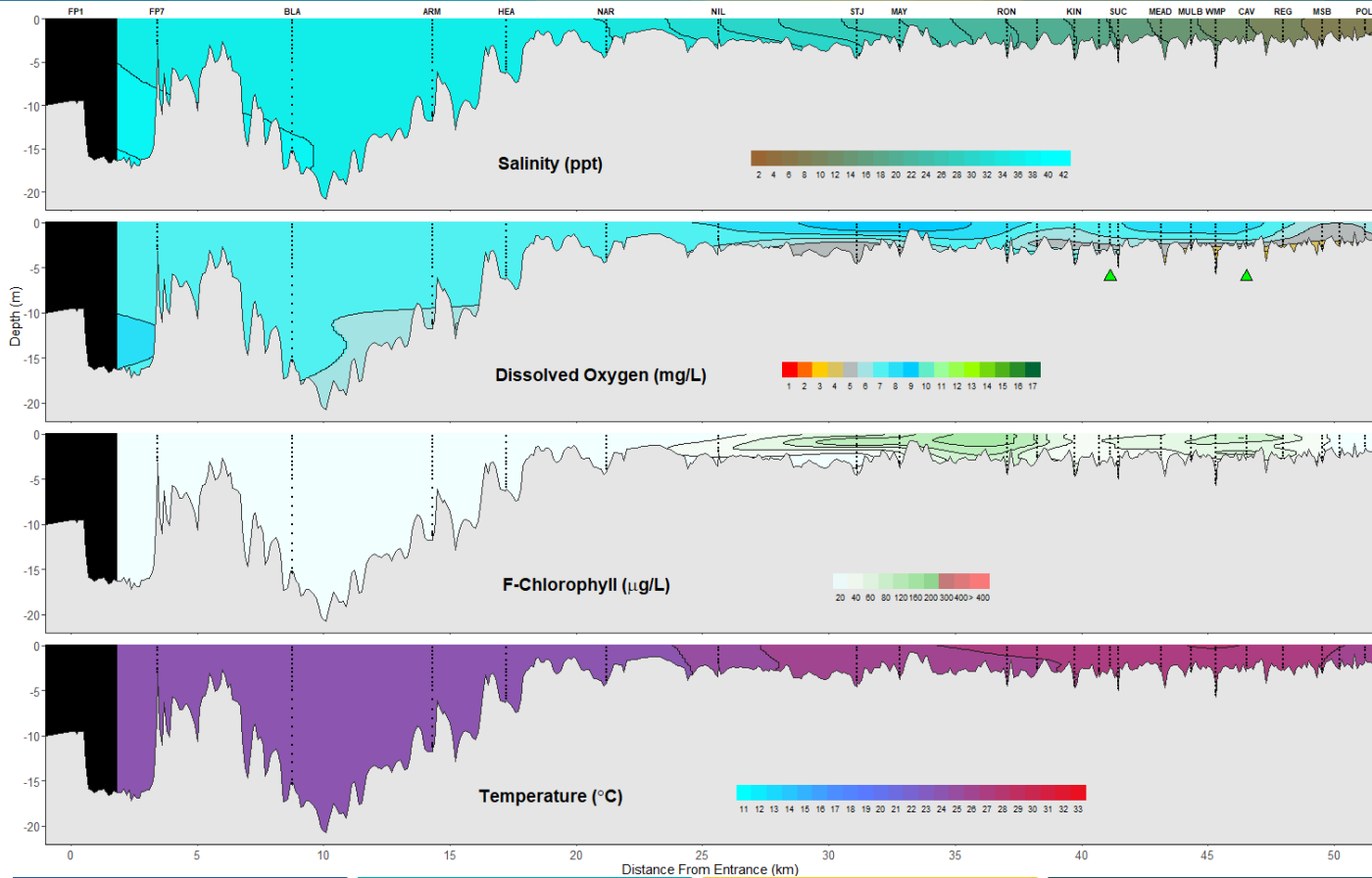
### Lower Swan Canning Estuary to Upper Swan Estuary

16<sup>th</sup> January 2023

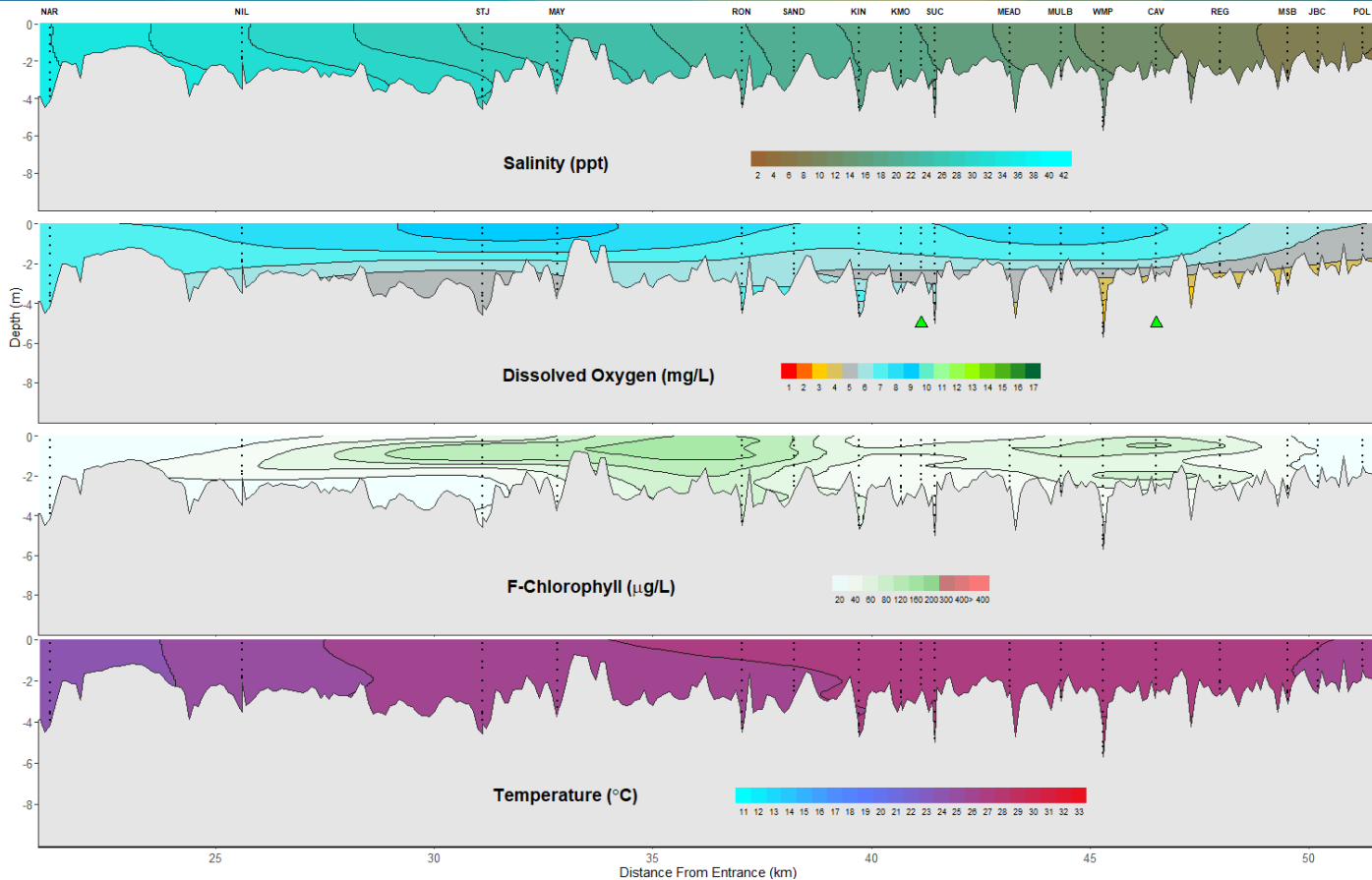
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## Swan Canning Estuary - Water Quality Profiles - 16<sup>th</sup> January 2023



## Middle and Upper Swan Estuary - Water Quality Profiles – 16<sup>th</sup> January 2023



**Date:** 16<sup>th</sup> January 2023

**Weather & tide conditions:** Conditions were sunny with a predominantly south westerly breeze of up to 16.5 knots. The predicted tides at Barrack St were 0.64 m at 7:52 am (low tide) and 1.05 m at 18:46 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 (FP7 to NAR):** The Lower Swan Canning Estuary was saline and waters were oxygenated or well oxygenated throughout. Chlorophyll fluorescence was low throughout and water temperature ranged from 22.7 to 23.7 °C at the time of sampling.

**Middle Swan Estuary (NIL to RON):** The Middle Swan Estuary was saline at NIL and STJ, brackish over saline at MAY and brackish at RON. Waters were oxygenated or well oxygenated throughout, except for bottom water at STJ which were low in oxygen. Chlorophyll fluorescence was moderate within surface waters of STJ and MAY and high in surface waters of RON. Water temperature ranged from 24.4 to 26.2 °C at the time of sampling.

**Upper Swan Estuary (SAND to POL):** The Upper Swan Estuary was brackish throughout. Numerous sites, including SAND, KMO, SUC, MULB, WMP, REG and MSB, had bottom waters which were low in oxygen. All other sites and surface waters were oxygenated or well oxygenated. Chlorophyll fluorescence was moderate within surface waters of SAND and those from MEAD - REG. Water temperature ranged from 25.5 to 27.6 °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).  
FP1 was not sampled this week due to unfavourable conditions.

**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>