



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

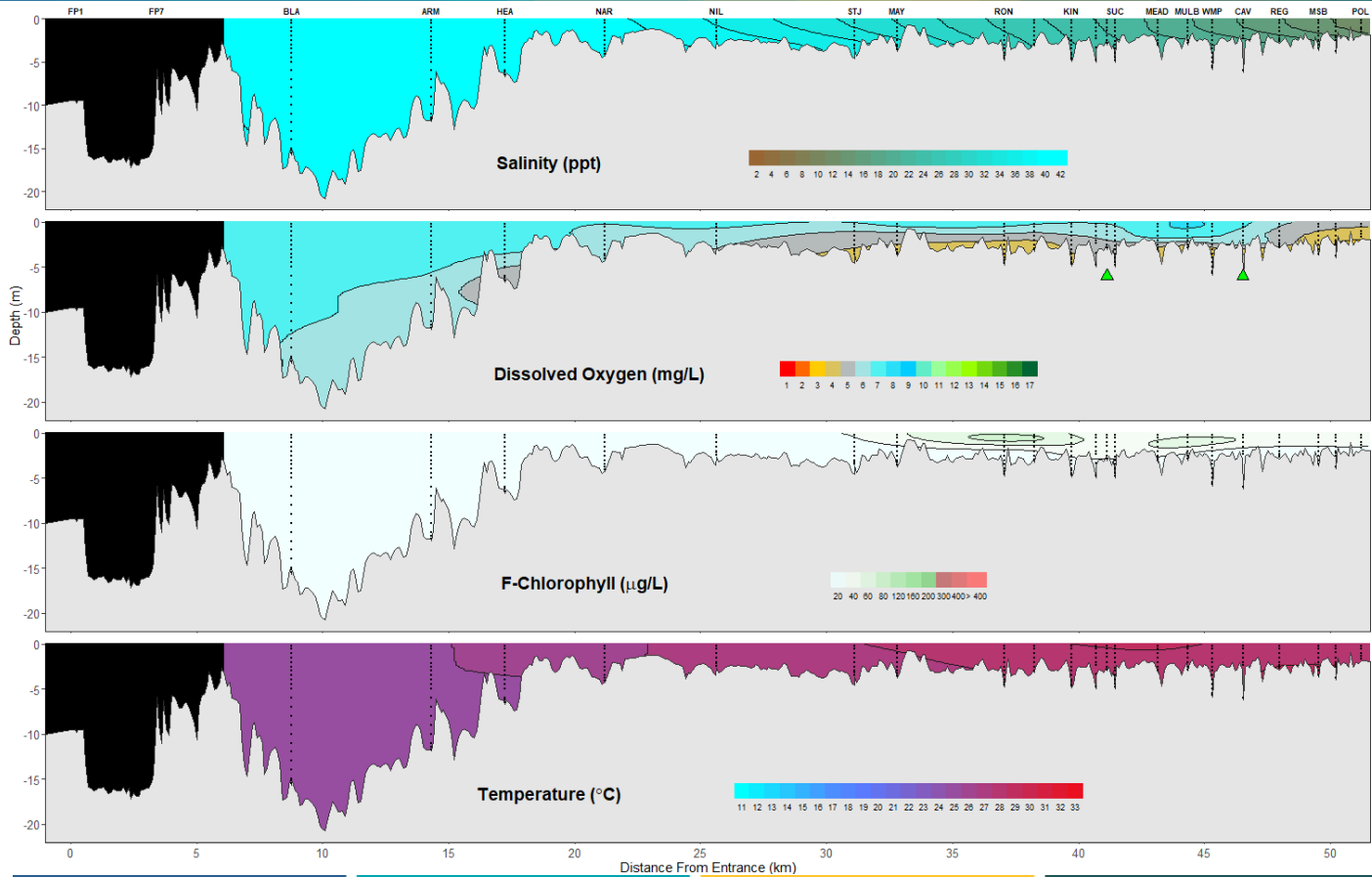
### Lower Swan Canning Estuary to Upper Swan Estuary

6<sup>th</sup> February 2023

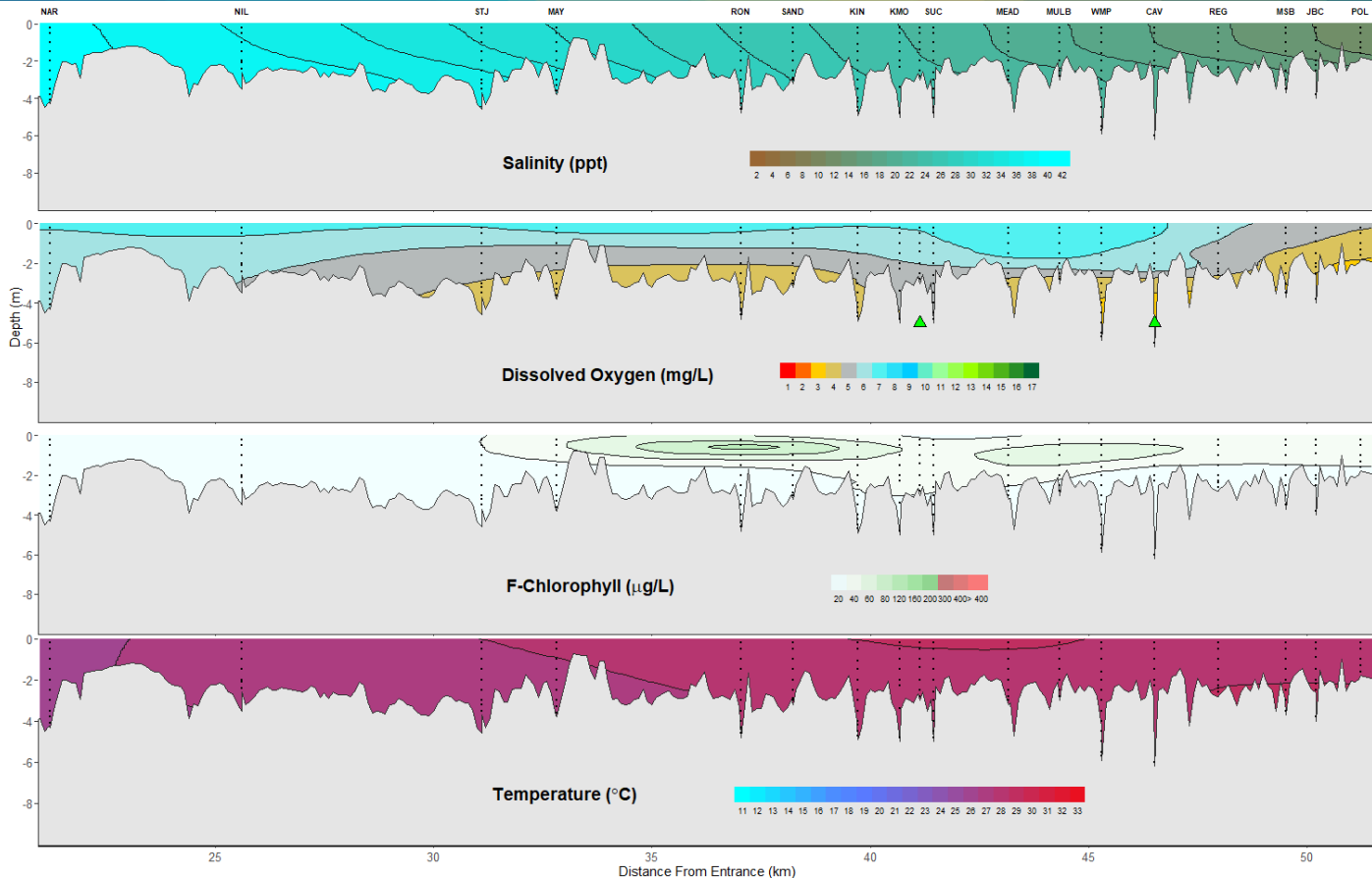
Prepared by

Rivers and Estuaries Science  
Biodiversity and Conservation Science  
Department of Biodiversity, Conservation and Attractions

## Swan Canning Estuary - Water Quality Profiles - 6<sup>th</sup> February 2023



## Middle and Upper Swan Estuary - Water Quality Profiles – 6th<sup>th</sup> February 2023



**Date:** 6<sup>th</sup> February 2023

**Weather & tide conditions:** Conditions were partly cloudy with a variable westerly breeze of up to 8 knots. The predicted tides at Barrack St were of 0.57m at 8:47 am (low tide) and 1.1m at 11:22pm (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 (BLA to NAR):** The Lower Swan Canning Estuary was hypersaline and oxygenated or well oxygenated throughout. Chlorophyll fluorescence was low throughout, and water temperature ranged from 24.3 to 25.5 °C at the time of sampling.

**Middle Swan Estuary (NIL to RON):** The Middle Swan Estuary was hypersaline at NIL and saline between STJ and RON. Surface waters were oxygenated or well oxygenated throughout and bottom waters were low in oxygen between STJ and RON. Chlorophyll fluorescence was moderate in the surface waters at RON. Water temperature ranged from 26.6 to 28.1 °C at the time of sampling.

**Upper Swan Estuary (SAND to POL):** The Upper Swan Estuary was brackish over saline at SAND and brackish from KIN to POL. Surface waters were oxygenated to well oxygenated throughout while bottom waters from SAND to VIT and MEAD to POL were low in Oxygen. Chlorophyll fluorescence was moderate in surface to middle waters from SAND to KMO and MEAD to MULB. Water temperature ranged from 27.0 to 28.4 °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). POL was sampled this week, however chlorophyll fluorescence was unable to be measured and caused all parameters to be removed from plotting.

**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>