

# Swan Canning Estuary Water Quality Monitoring Project

## Weekly Water Quality Report

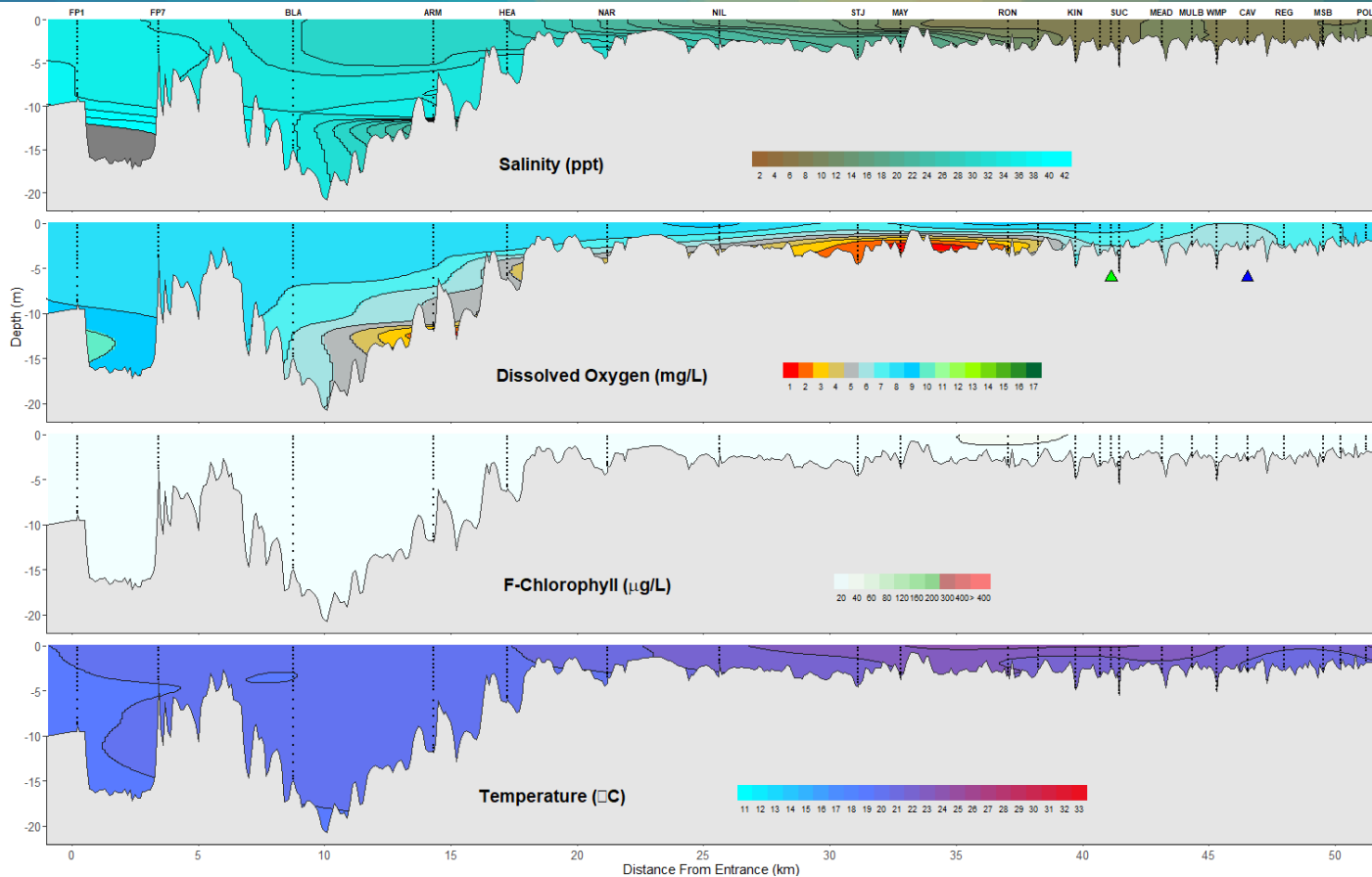
### Lower Swan Canning Estuary to Upper Swan Estuary

21<sup>st</sup> November 2022

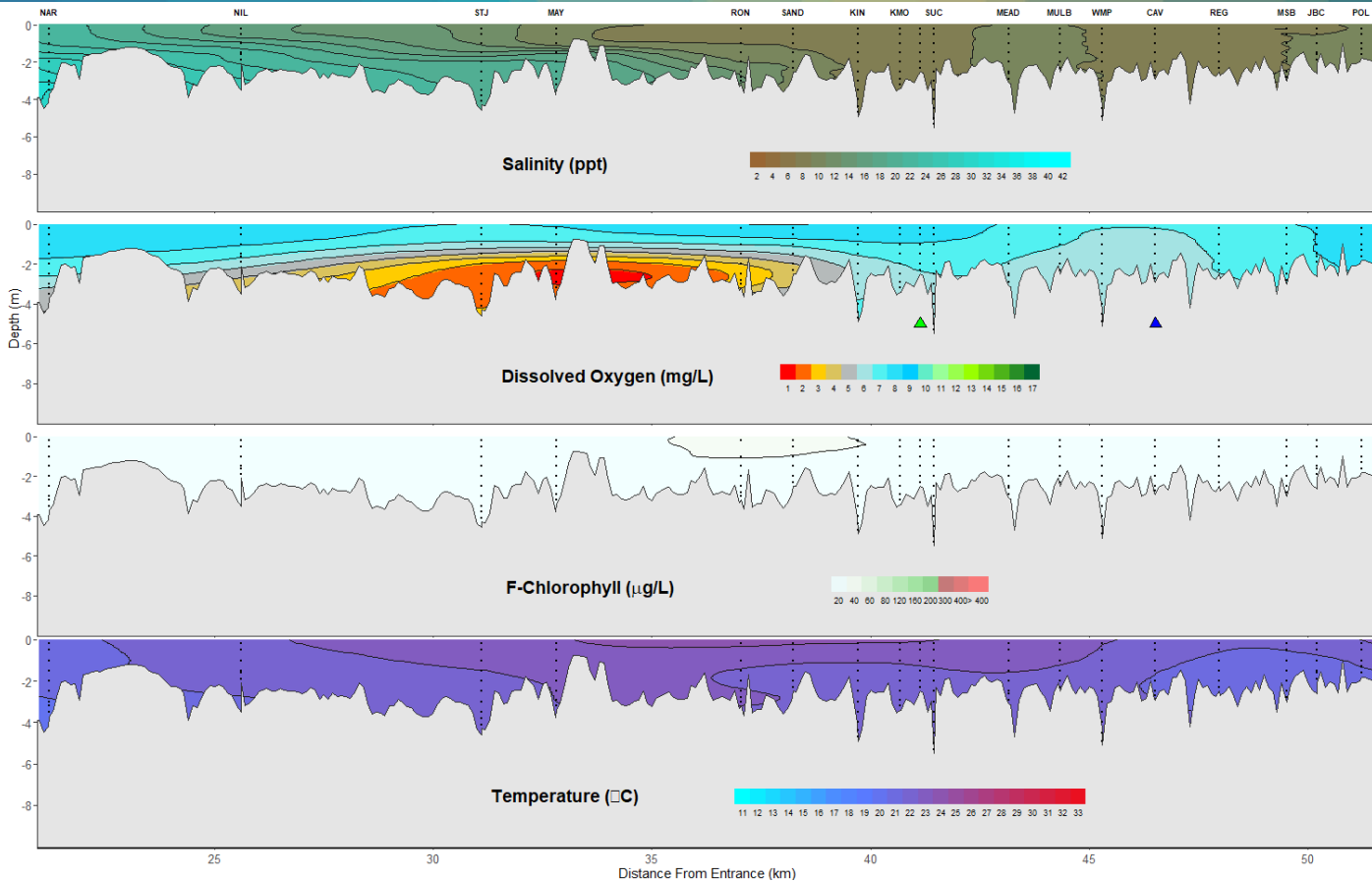
Prepared by

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

## Swan Canning Estuary- Water Quality Profiles – 21<sup>st</sup> November 2022



## Middle and Upper Swan Estuary- Water Quality Profiles – 21<sup>st</sup> November 2022



Date: 21<sup>st</sup> November 2022

Weather & tide conditions: Conditions were sunny with a predominantly north easterly breeze of up to ~10 knots. The predicted tides at Barrack St were 0.66 m at 5:32 am (low tide) 0.75 m at 11:21 am (high tide), and 1.03 m at 9:35 pm (second high tide). Perth recorded 28 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (FPI to NAR): The Lower Swan Canning Estuary was saline from FPI to HEA and brackish over saline at NAR. Waters were oxygenated or well oxygenated throughout and chlorophyll fluorescence was low. Water temperature ranged from 19 to 20.1 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish and waters were oxygenated or well oxygenated, with the exception of bottom waters at STJ, MAY and RON, which were low in oxygen or hypoxic. Chlorophyll fluorescence was low throughout and water temperature ranged from 21.5 to 23.5 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish and waters were oxygenated or well oxygenated, with the exception of bottom water at SAND, which was low in oxygen. Chlorophyll fluorescence was low throughout and water temperature ranged from 20.4 to 23.2 °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 < 60 µg L<sup>-1</sup>, moderate 60-160 µg L<sup>-1</sup>, high 160-400 µg L<sup>-1</sup>, extreme > 400 µg L<sup>-1</sup>

**Recommended reference:** Department of Biodiversity, Conservation and Attractions, 2022. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 21<sup>st</sup> November 2022*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)