



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

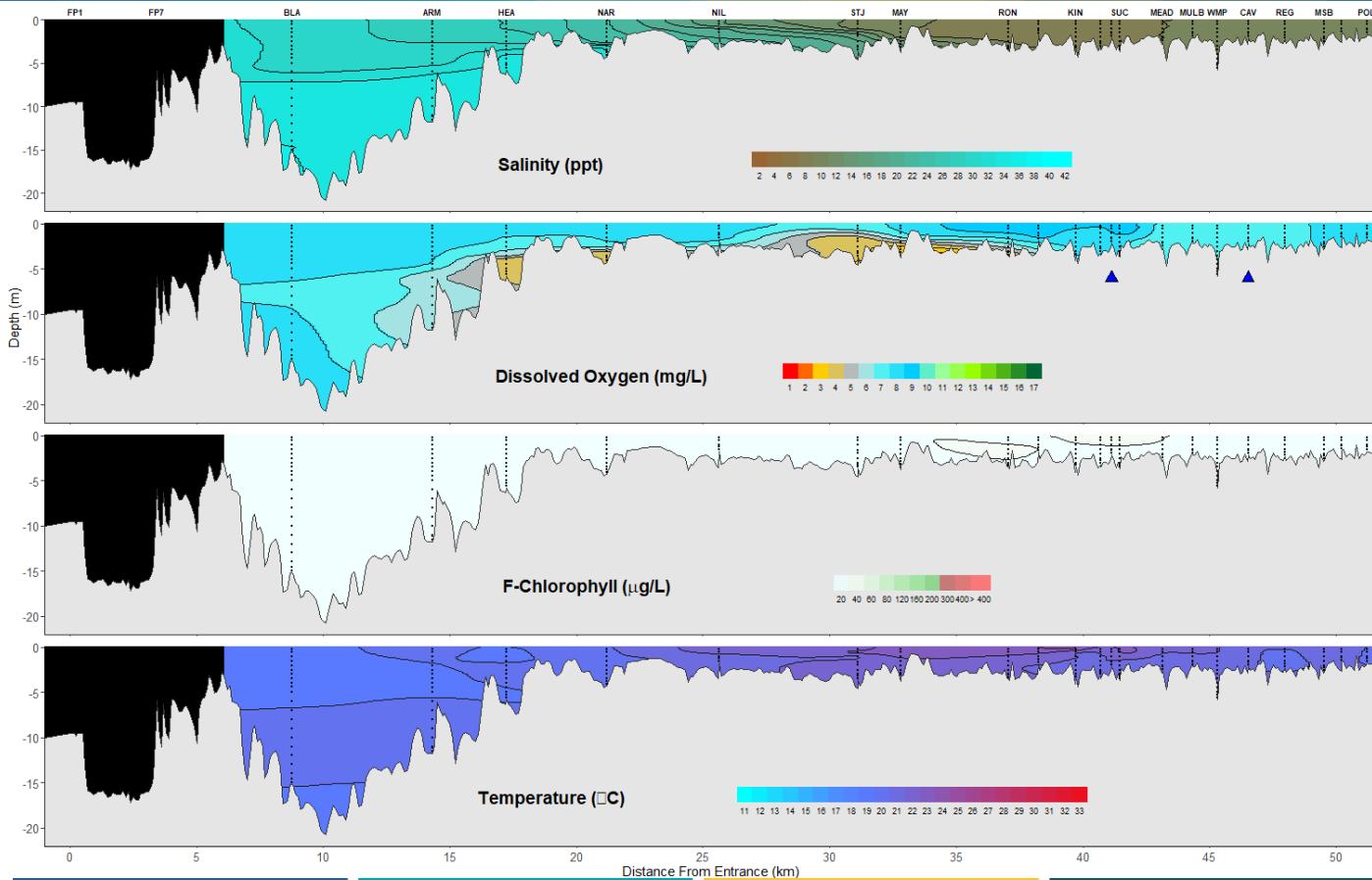
### Lower Swan Canning Estuary to Upper Swan Estuary

14<sup>th</sup> November 2022

Prepared by

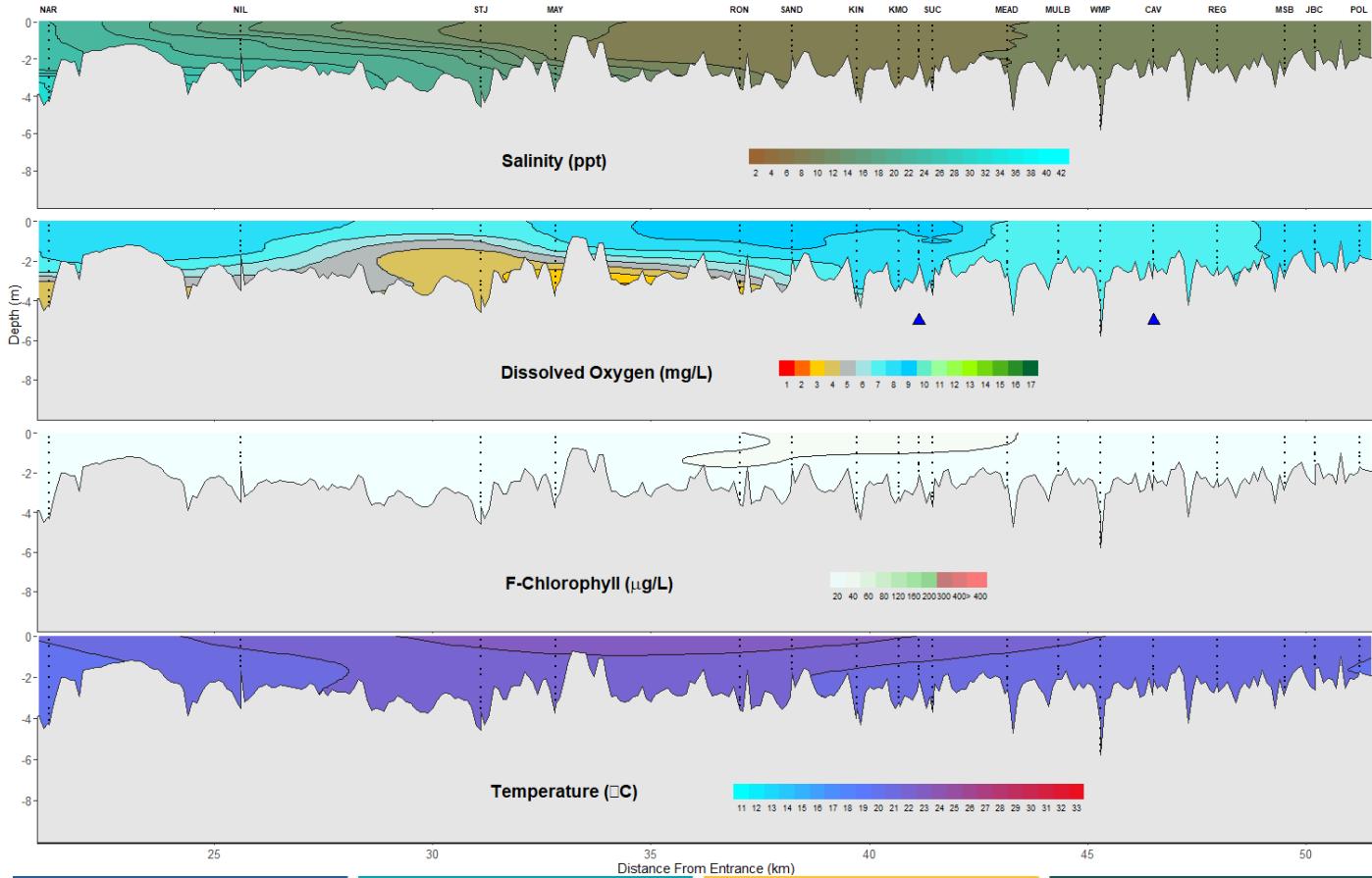
Rivers and Estuaries Science  
Biodiversity and Conservation Science  
Department of Biodiversity, Conservation and Attractions

## Swan Canning Estuary - Water Quality Profiles - 14<sup>th</sup> November 2022





## Middle and Upper Swan Estuary - Water Quality Profiles - 14<sup>th</sup> November 2022





Date: 14<sup>th</sup> November 2022

Weather & tide conditions: Conditions were sunny with a moderate easterly breeze of up to 6.9 knots. The predicted tides at Barrack St were 1.05 m at 12:50 am (high tide) and 0.57 m at 12:07 pm (low tide). Perth recorded 4.8 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were both operable but not triggered to provide oxygen during the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline from BLA to HEA and brackish over saline at NAR. Waters were oxygenated or well oxygenated throughout except for bottom waters at HEA and NAR, which were low in oxygen. Chlorophyll fluorescence was low throughout and water temperature ranged from 18.6 to 19.9 °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 throughout, except at the bottom waters of STJ, MAY and RON, which were low in oxygen. Chlorophyll fluorescence was low and water temperature ranged from 20.5 to 22.6 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish and waters were well oxygenated throughout. Chlorophyll fluorescence was low, except for surface water at SUC, which featured moderate concentrations. Temperature ranged from 19.7 to 22.8 °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 14<sup>th</sup> November 2022. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)