



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

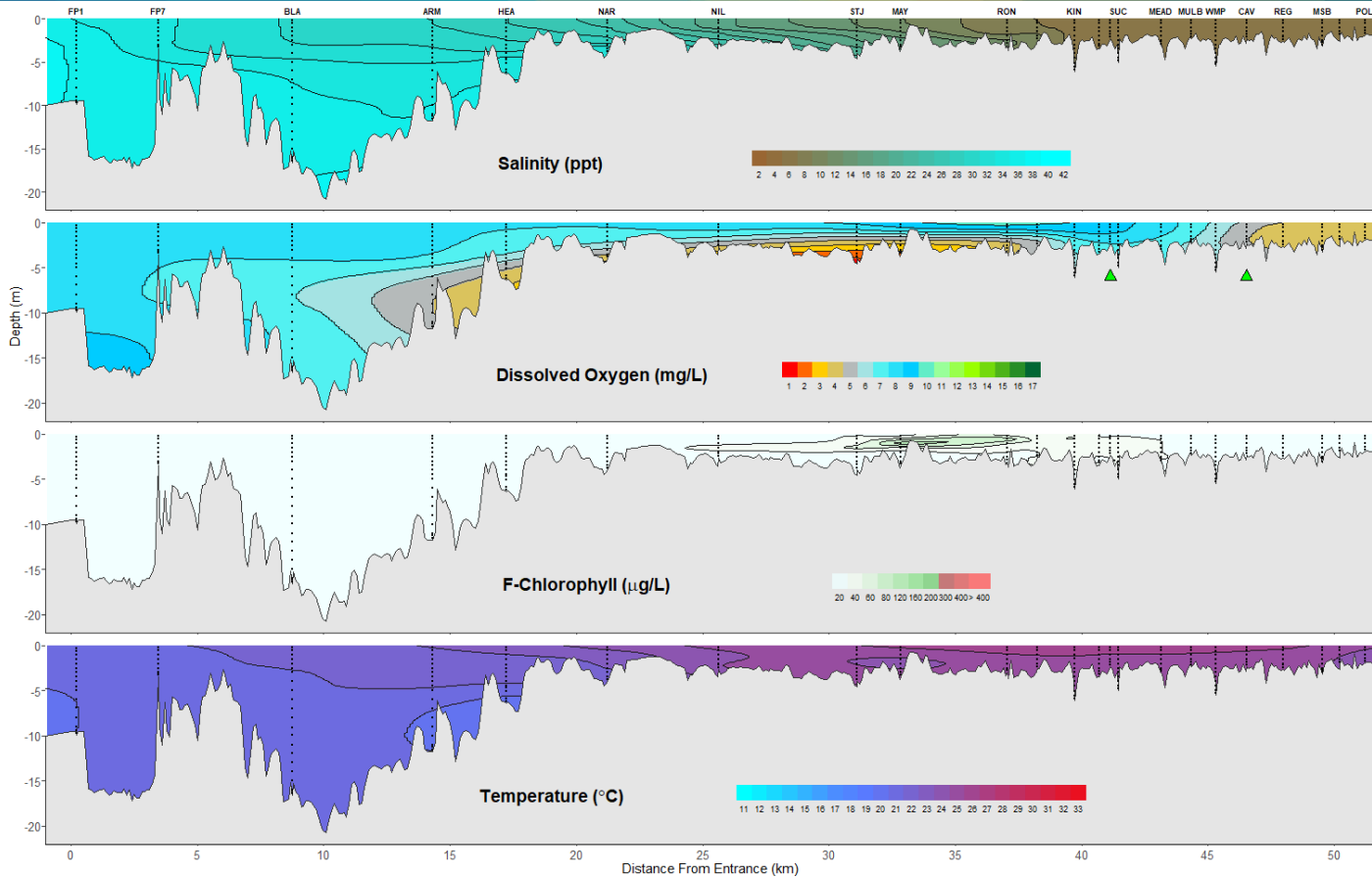
Lower Swan Canning Estuary to Upper Swan Estuary

4 November 2024

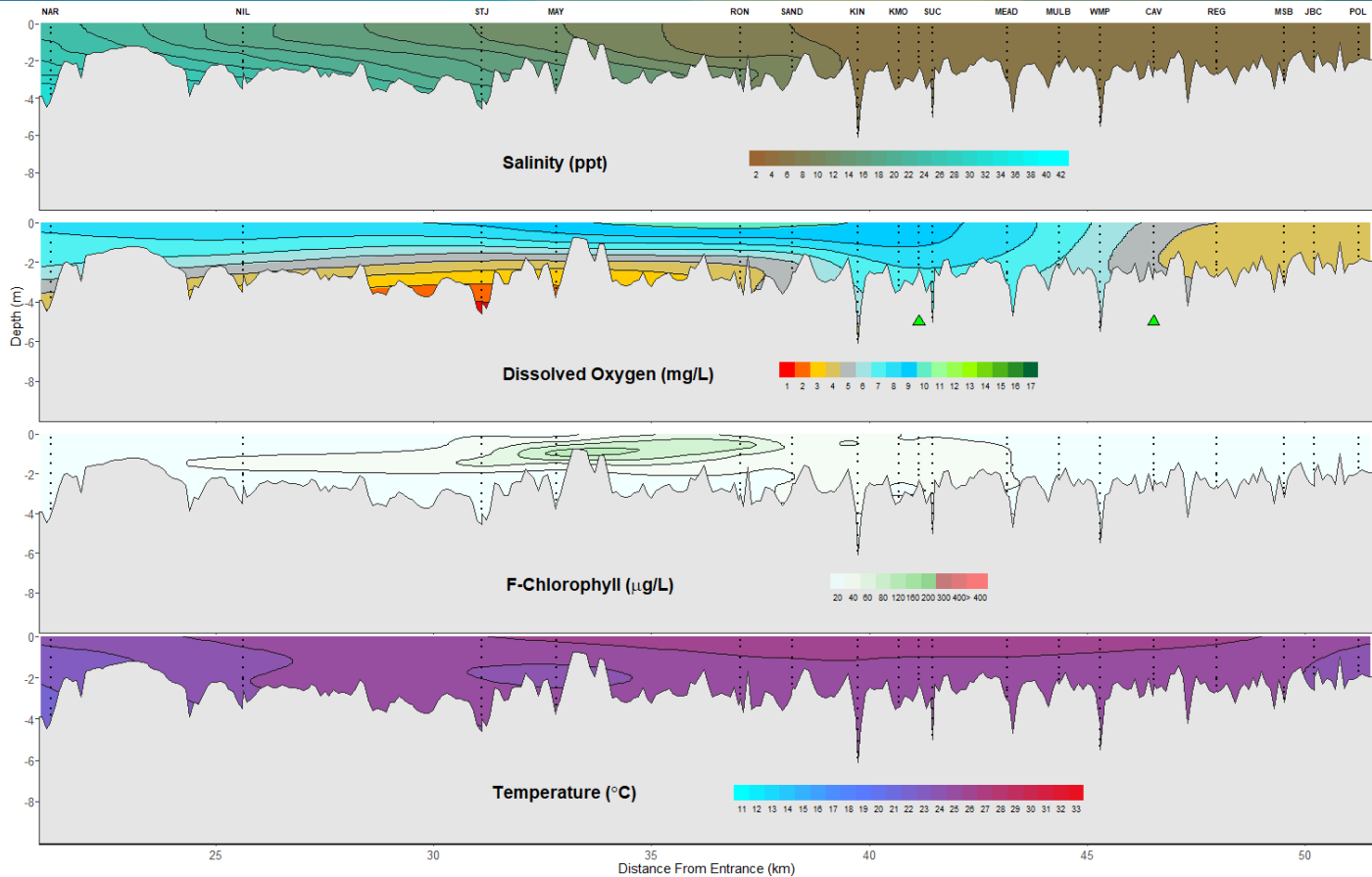
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Swan Canning Estuary - Water Quality Profiles – 4 November 2024



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Date: 4 November 2024

Weather & tide conditions: Conditions were clear with a predominately westerly breeze of up to 11.1 knots. The predicted tide at Barrack St was 0.51 m at 9:43 am (low tide). Perth recorded 2.8 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plant were triggered to provide oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (FPI to NAR): The Lower Swan Canning Estuary was saline from FP1 to HEA and brackish over saline at NAR. Waters were oxygenated or well oxygenated, except bottoms waters from HEA to NAR which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 19.8 to 23.4 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish. Waters were oxygenated or well oxygenated, except bottom waters at STJ which were hypoxic and MAY and RON which were low in oxygen. Chlorophyll fluorescence was moderate in surface waters from MAY to RON and water temperatures ranged from 23.5 to 25.7 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish at SAND, fresh over brackish at KIN and fresh from KMO to POL. Waters from SAND to WMP were oxygenated or well oxygenated, except bottom water at SAND which were low in oxygen and KIN which were hypoxic. Waters from CAV to POL were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 22.3 to 25.9 °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.

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⁻¹, oxygenated >4-6 mg L⁻¹, low oxygen >2-4 mg L⁻¹, hypoxic 0.5-2 mg L⁻¹, anoxic <0.5 mg L⁻¹
Chlorophyll fluorescence (mod/high flow): low < 60 µg L⁻¹, moderate 60-160 µg L⁻¹, high 160-400 µg L⁻¹, extreme > 400 µg L⁻¹

Recommended reference: Department of Biodiversity, Conservation and Attractions, 2024. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 4 November 2024*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)