



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

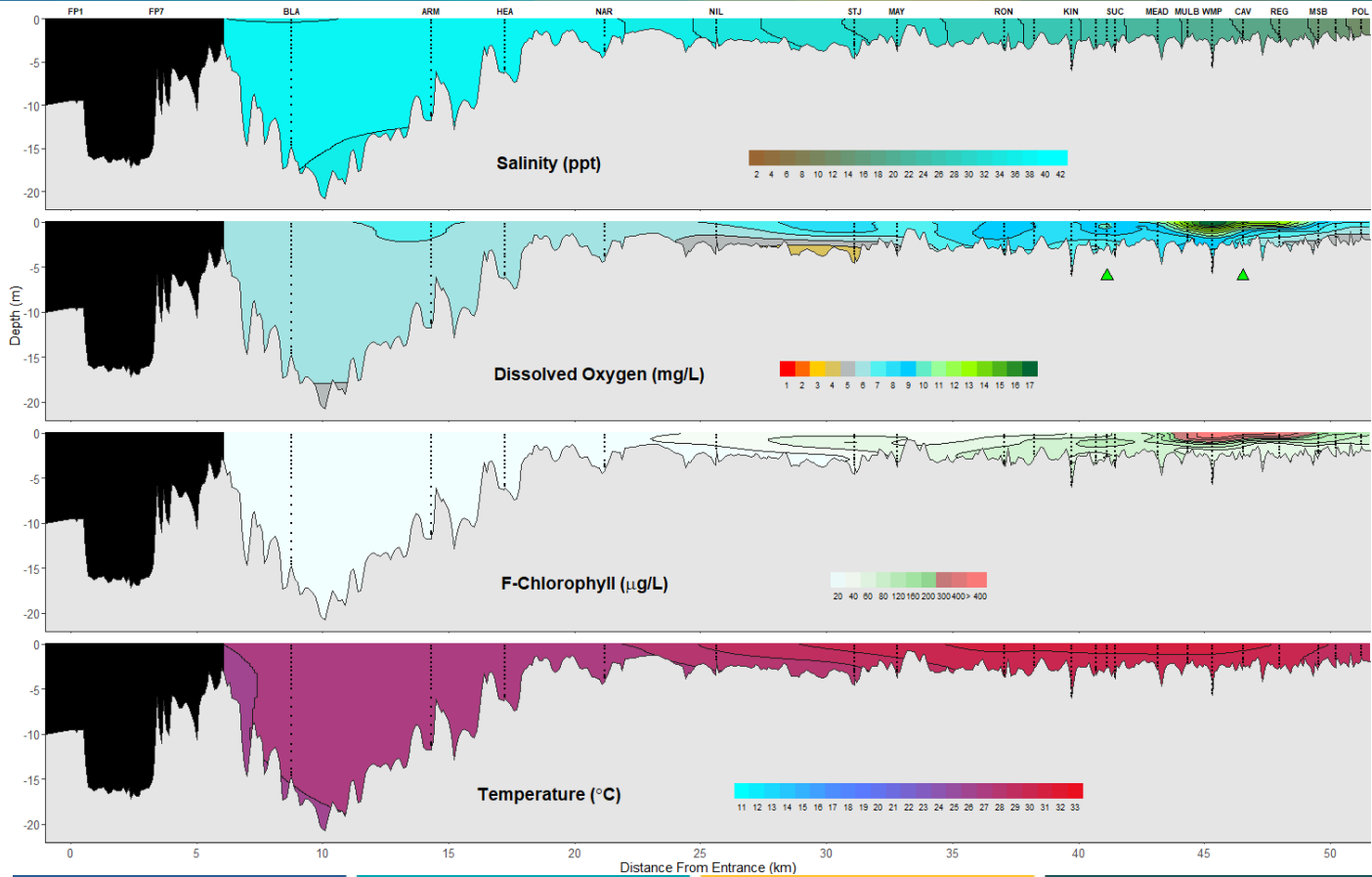
Lower Swan Canning Estuary to Upper Swan Estuary

22nd January 2024

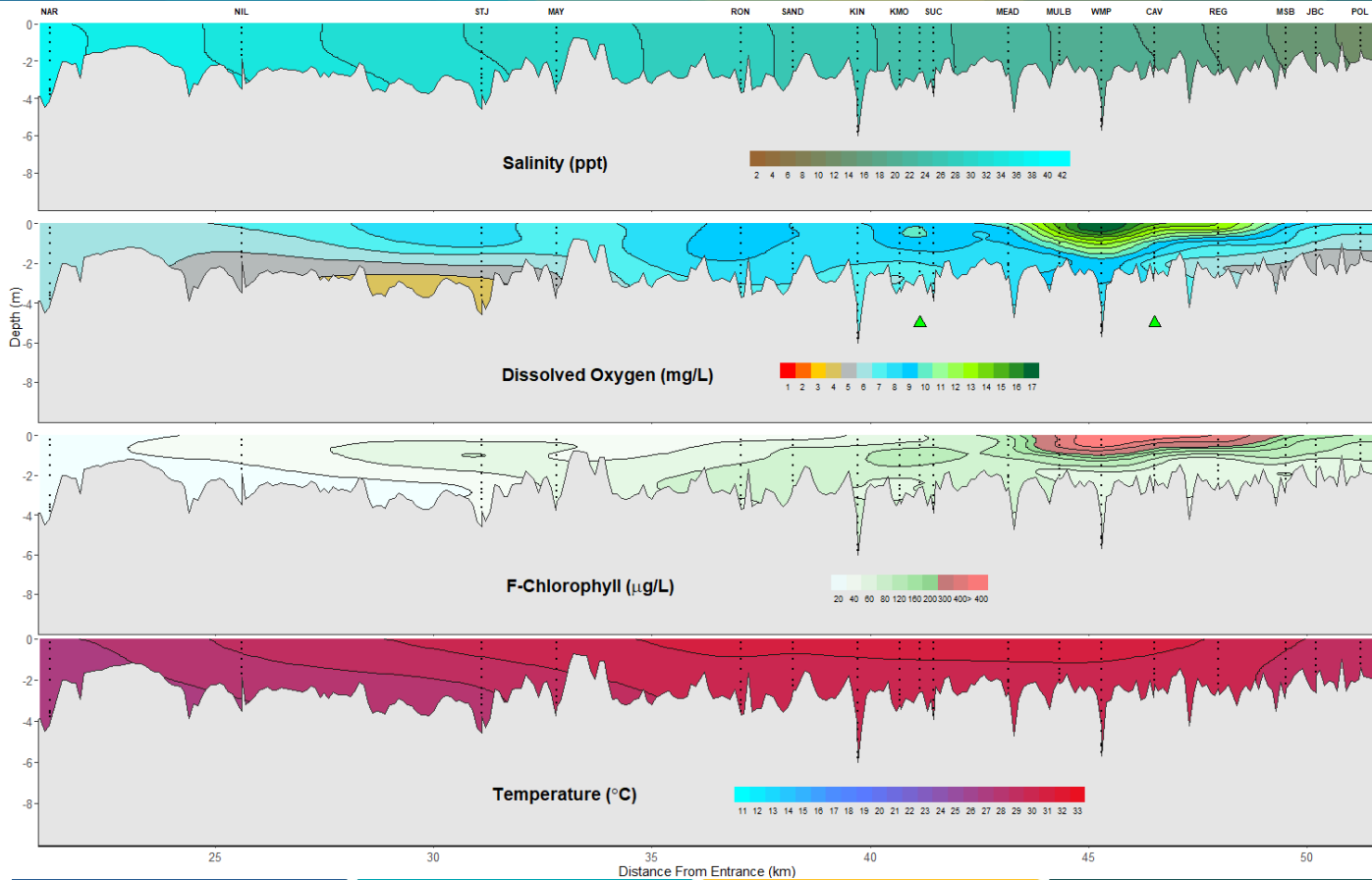
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Swan Canning Estuary - Water Quality Profiles – 22nd January 2024



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Date: 22nd January 2024

Weather & tide conditions: Conditions were sunny with a predominately south westerly breeze of up to 9 knots. The predicted tides at Barrack St were 0.49 m at 7:36 am (low tide) and 1.16 m at 8:39 pm (high tide). Perth recorded 0 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline and waters were oxygenated to well oxygenated. Chlorophyll fluorescence was low and water temperatures ranged from 26.0 to 26.8 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline. Waters were oxygenated to well oxygenated, except at bottom waters at STJ which were low in oxygen. Chlorophyll fluorescence was moderate in the subsurface waters at RON. Water temperatures ranged from 27.6 to 30.3 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was saline at SAND and brackish from KIN to POL. Waters were oxygenated to well oxygenated, with dissolved oxygen concentrations exceeding 10.0 mg/L in surface waters from MULB to REG and peaking at 18.3 mg/L at WMP. Chlorophyll fluorescence was moderate in surface, subsurface or bottom waters at each site in the upper estuary, high in surface waters at MULB and CAV and extreme in surface waters at WMP and REG. Water temperatures ranged from 28.0 to 31.0 °C.

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 < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 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 22nd January 2024*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)