



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

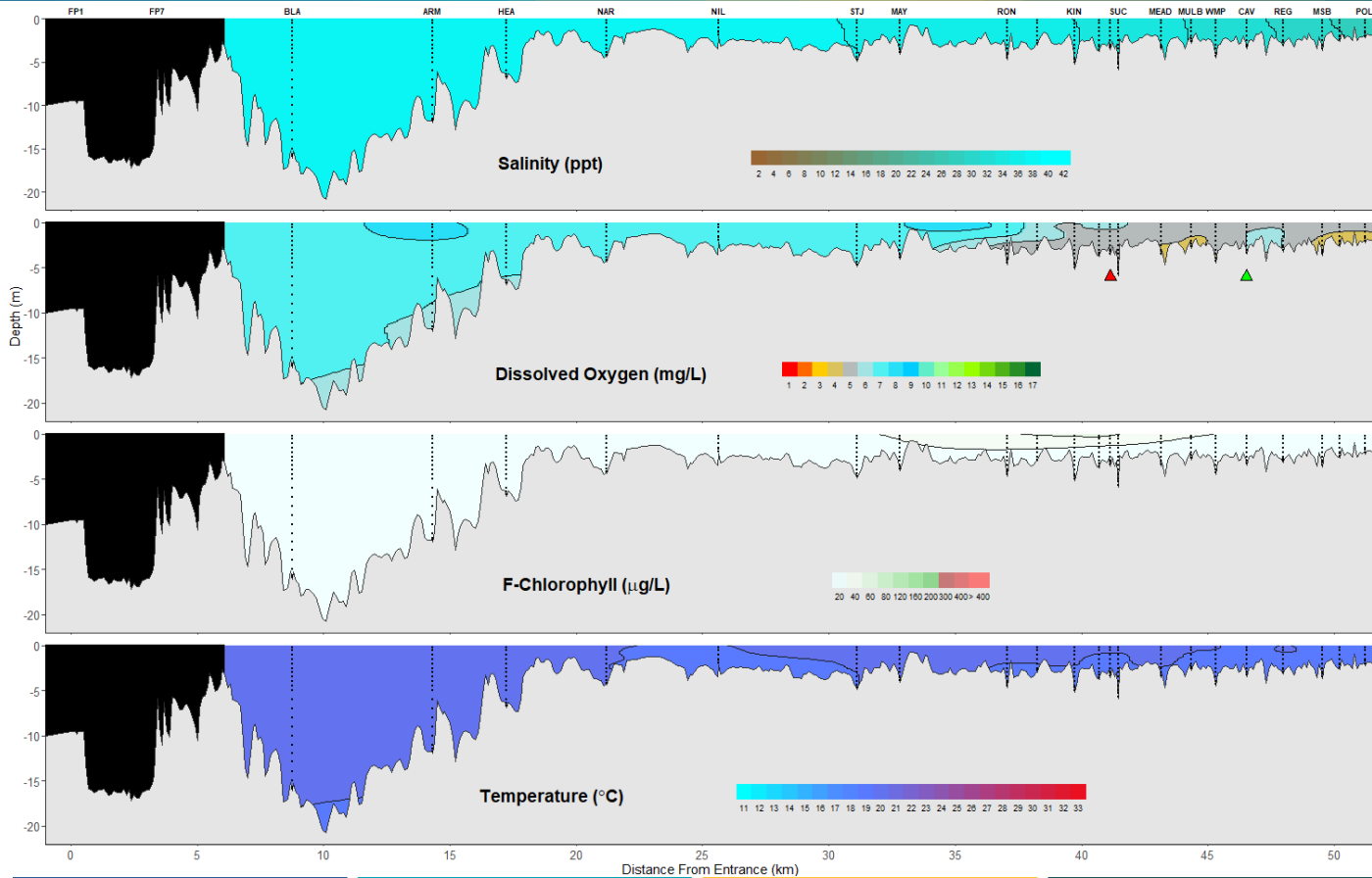
Lower Swan Canning Estuary to Upper Swan Estuary

13th May 2024

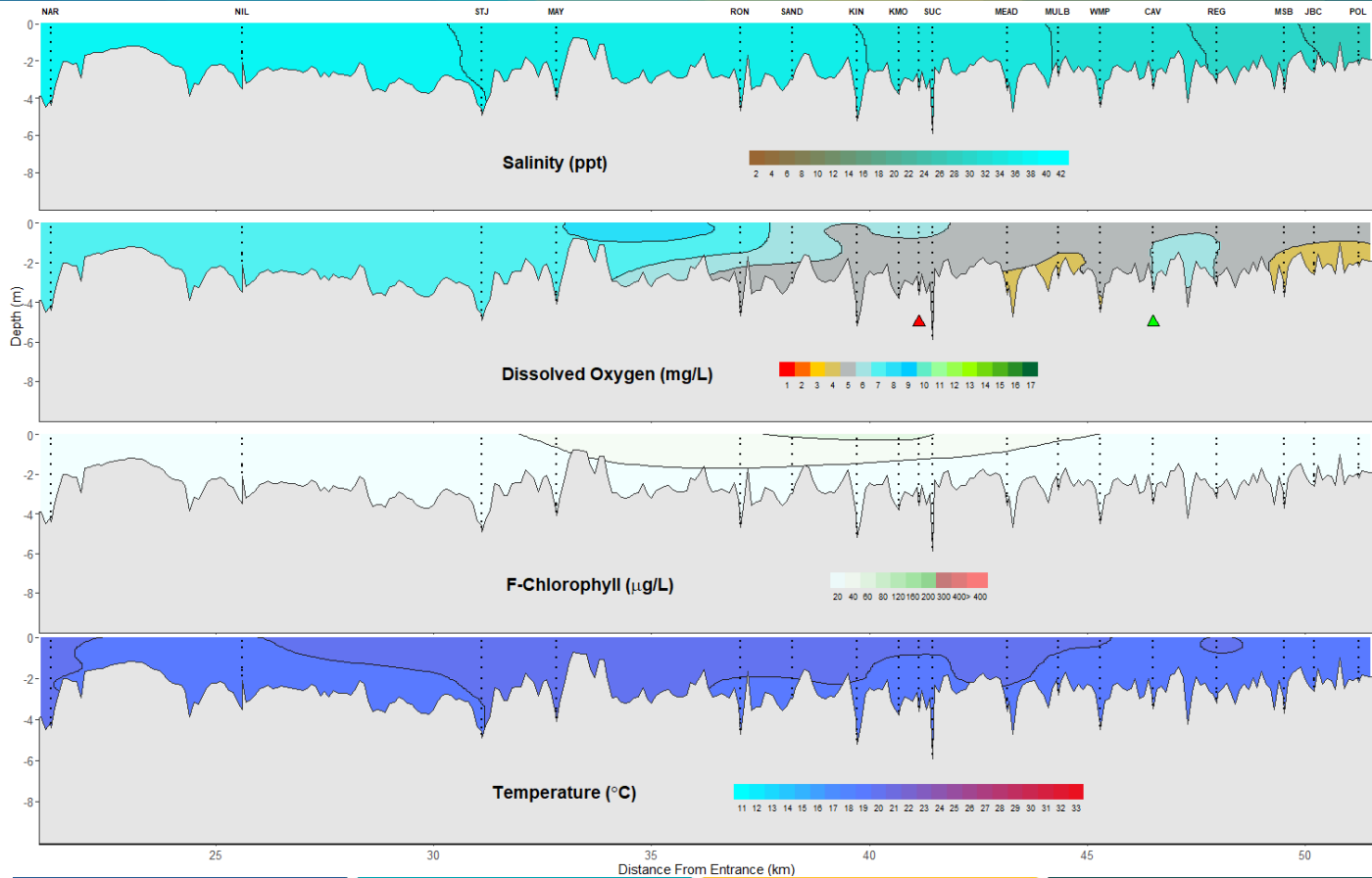
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Swan Canning Estuary - Water Quality Profiles – 13th May 2024



Swan Canning Estuary - Water Quality Profiles – 13th May 2024



Date: 13th May 2024

Weather & tide conditions: Conditions were partly cloudy in the morning transitioning to overcast in the afternoon. Winds were variable throughout the day, with a top wind speed of 7 knots. The predicted tides at Barrack St were 0.69 m at 1:18 am (low tide) and 1.24 m at 1:36 pm (high tide). Perth recorded zero rainfall in the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was hypersaline, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 19 to 19.6 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was hypersaline from NIL to MAY and saline at RON. Waters were oxygenated or well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 18.9 to 19.2 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was saline and surface waters were oxygenated or well oxygenated. Subsurface and bottoms waters from MEAD – POL would occasionally record low oxygen levels. Chlorophyll fluorescence was overall low, except for KMO and VIT, which had moderate surface fluorescence. Water temperatures ranged from 18.6 to 19.2 °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 (low 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 13th May 2024*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)