



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

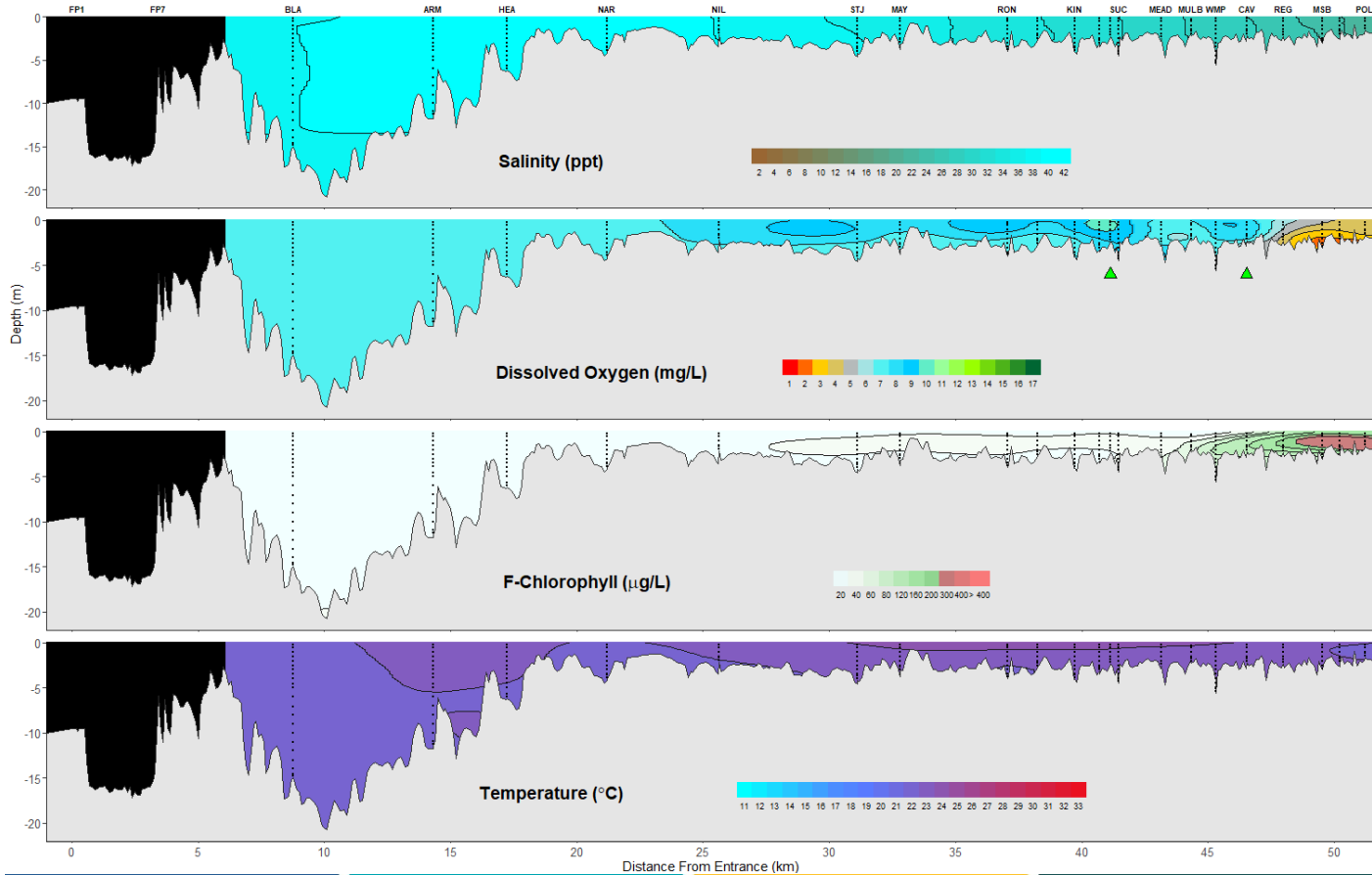
Lower Swan Canning Estuary to Upper Swan Estuary

2nd April 2024

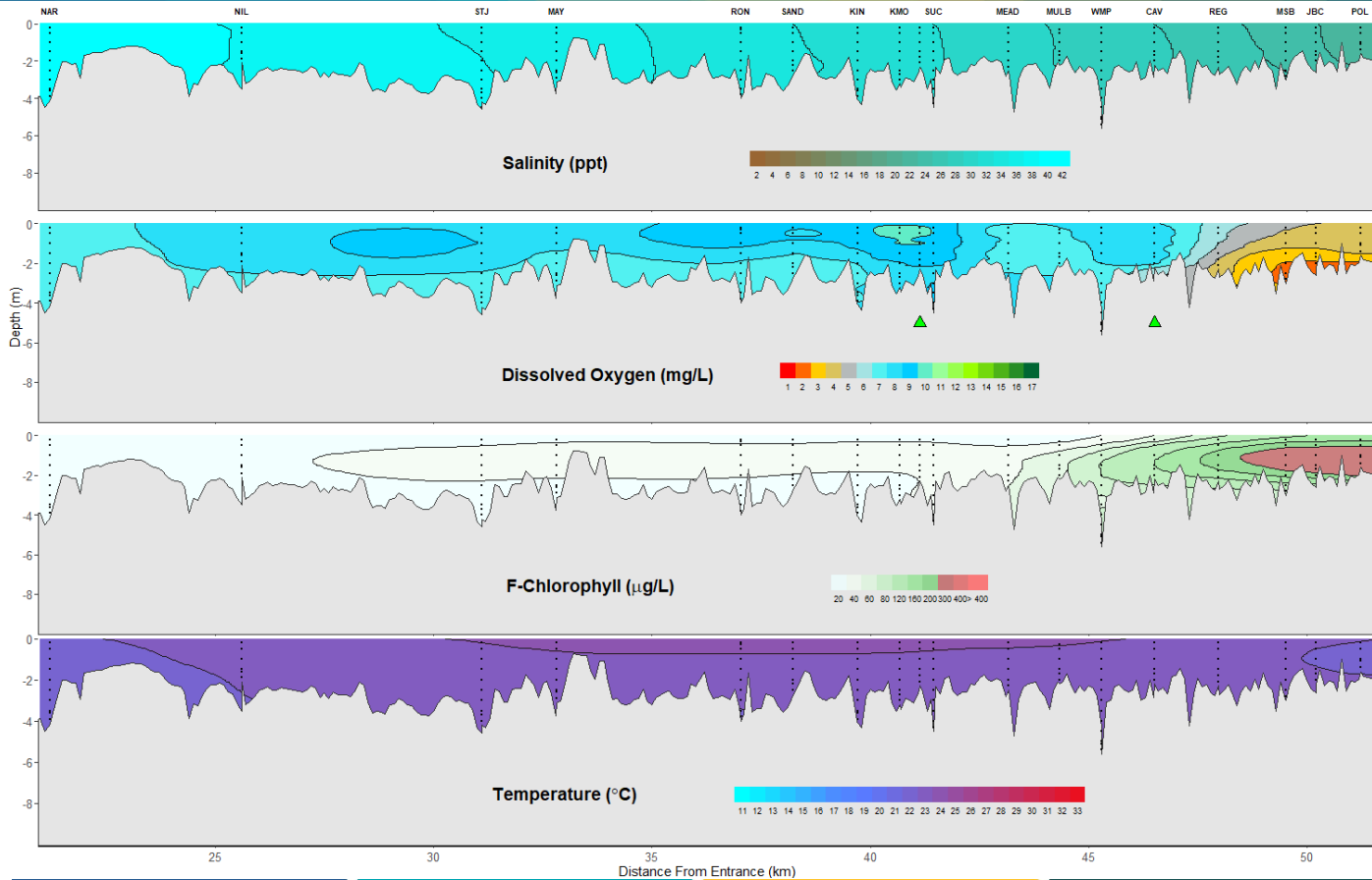
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Swan Canning Estuary - Water Quality Profiles – 2nd April 2024



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Date: 2nd April 2024

Weather & tide conditions: Conditions were clear with variable breeze of up to 17 knots. The predicted tides at Barrack St were 0.61 m at 3:47 am (low tide) and 1.17 m at 4:27 pm (high tide). Perth recorded no 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 hypersaline and waters were well oxygenated. Chlorophyll fluorescence was low and water temperatures ranged from 21.6 to 22.3 °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 well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 21.9 to 24.1 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was saline from SAND to CAV and brackish between REG and POL. Waters were oxygenated or well oxygenated between SAND and CAV, low in oxygen or hypoxic in bottom waters at REG and MSB and low in oxygen throughout the water column at JBC and POL. Chlorophyll fluorescence was low from SAND to MULB, low to moderate between WMP and CAV and high in subsurface and bottom waters from REG to POL. Water temperatures ranged from 21.8 to 23.8 °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 2nd April 2024*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)