



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

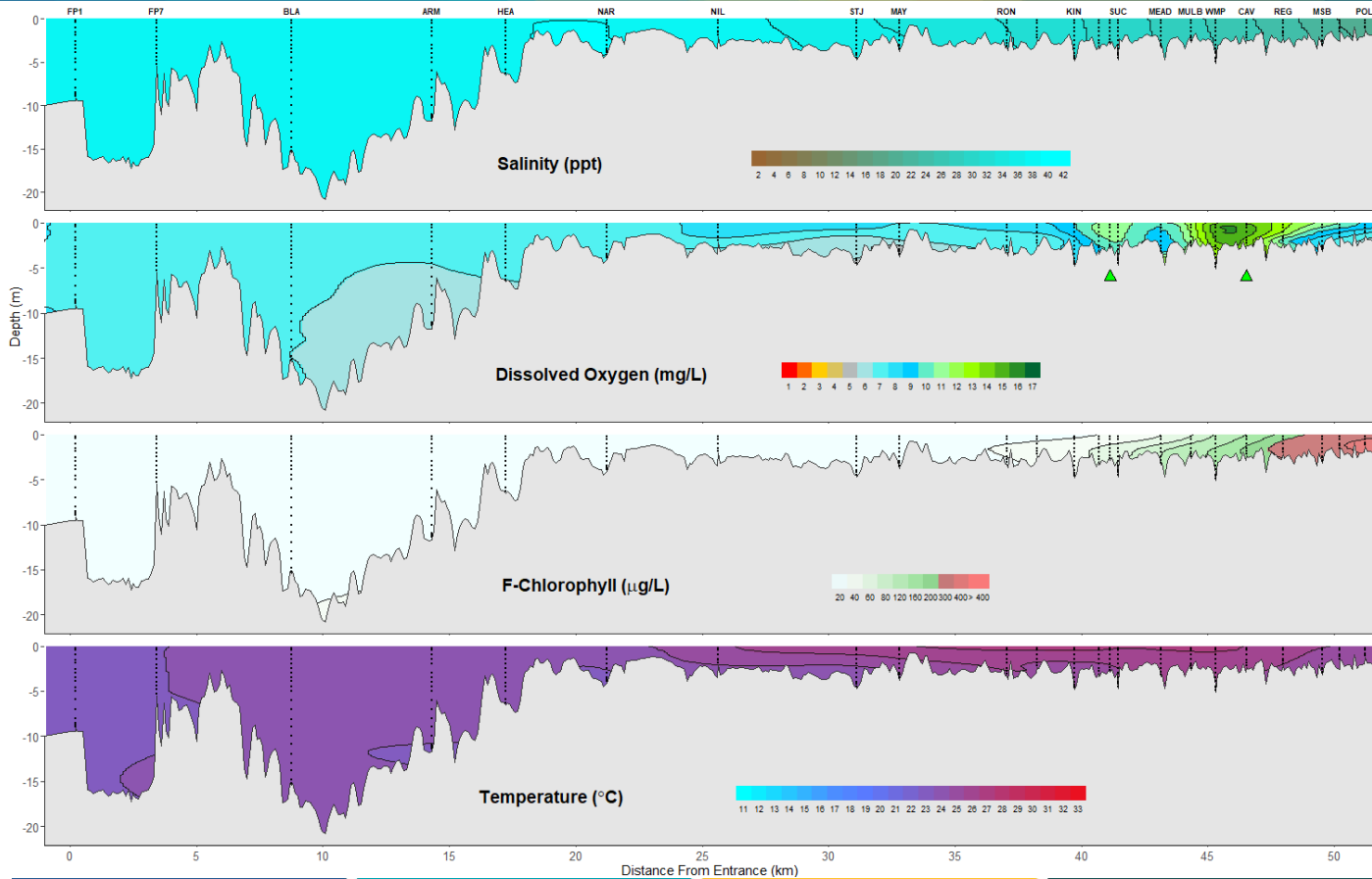
Lower Swan Canning Estuary to Upper Swan Estuary

11th March 2024

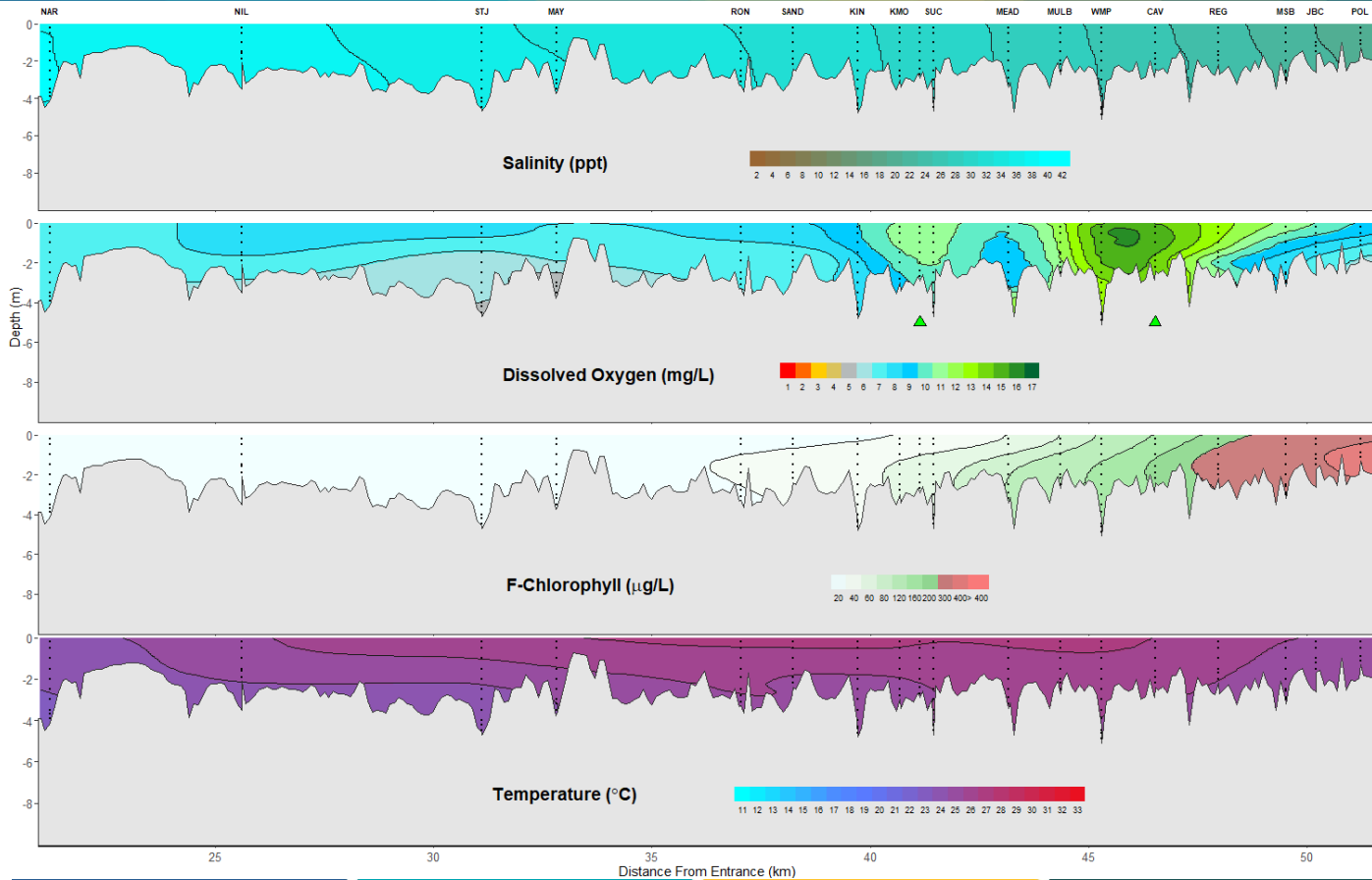
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Swan Canning Estuary - Water Quality Profiles – 11th March 2024



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Date: 11th March 2024

Weather & tide conditions: Conditions were clear with an easterly breeze of up to 8.3 knots. The predicted tides at Barrack St were 0.71 m at 7:23 am (low tide), 0.90 m at 1:17 pm (high tide) and 0.79 m at 6:17 pm (second low tide). Perth recorded 1.6 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 hypersaline and waters were oxygenated to well oxygenated. Chlorophyll fluorescence was low and water temperatures ranged from 23.4 to 23.7 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was hypersaline at NIL, saline over hypersaline at STJ and saline from MAY to RON. Waters were oxygenated to well oxygenated. Chlorophyll fluorescence was low and water temperatures ranged from 23.8 to 26.3 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was saline between SAND and WMP and brackish from CAV to POL. Waters were oxygenated or well oxygenated and exceeded 15 mg/L at WMP. Chlorophyll fluorescence was low to moderate between SAND and WMP, moderate to high at CAV, high from REG to JBC and moderate to extreme at POL. Water temperatures ranged from 24.3 to 26.9 °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 11th March 2024*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)