



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

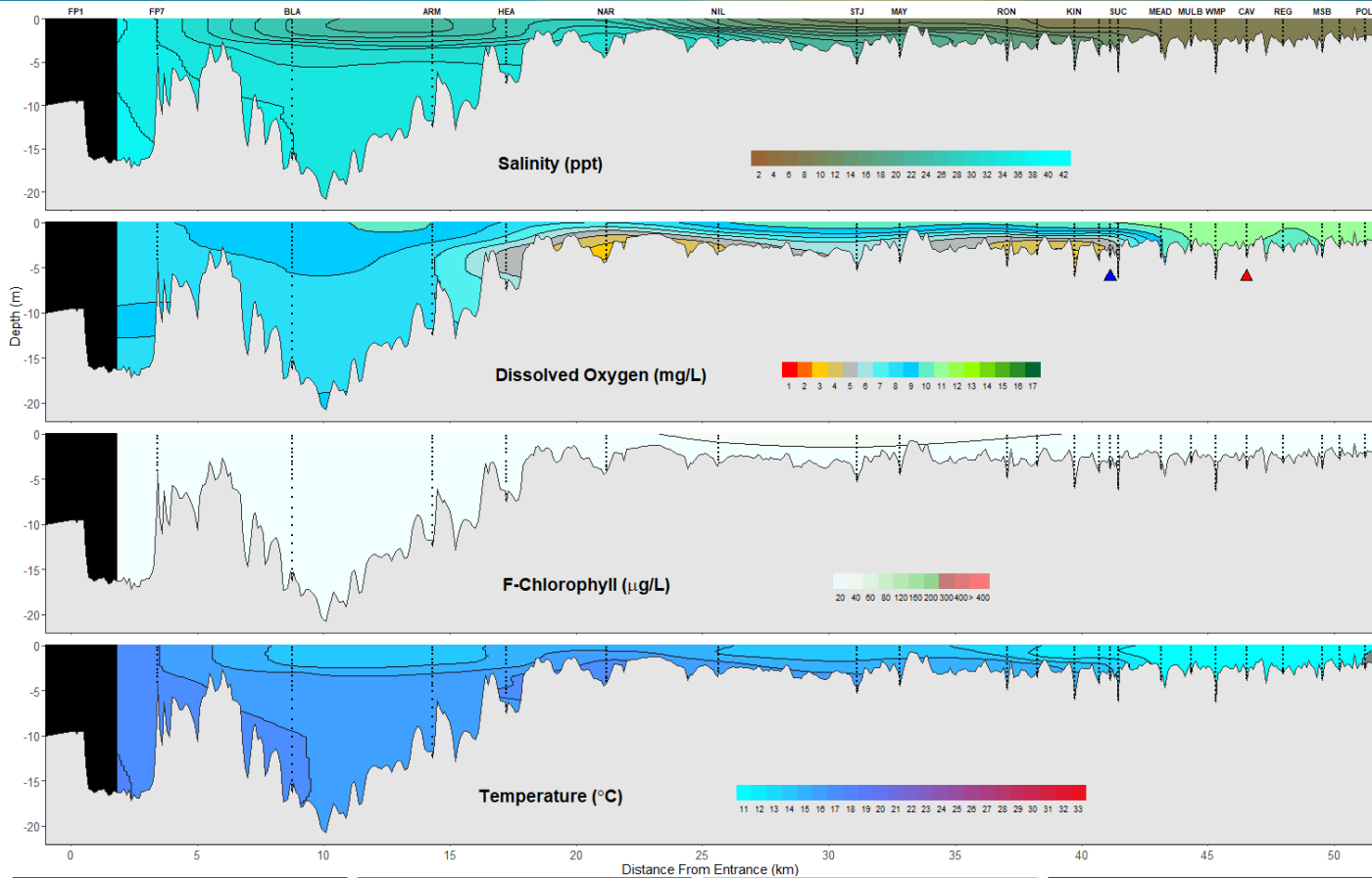
Lower Swan Canning Estuary to Upper Swan Estuary

3rd July 2023

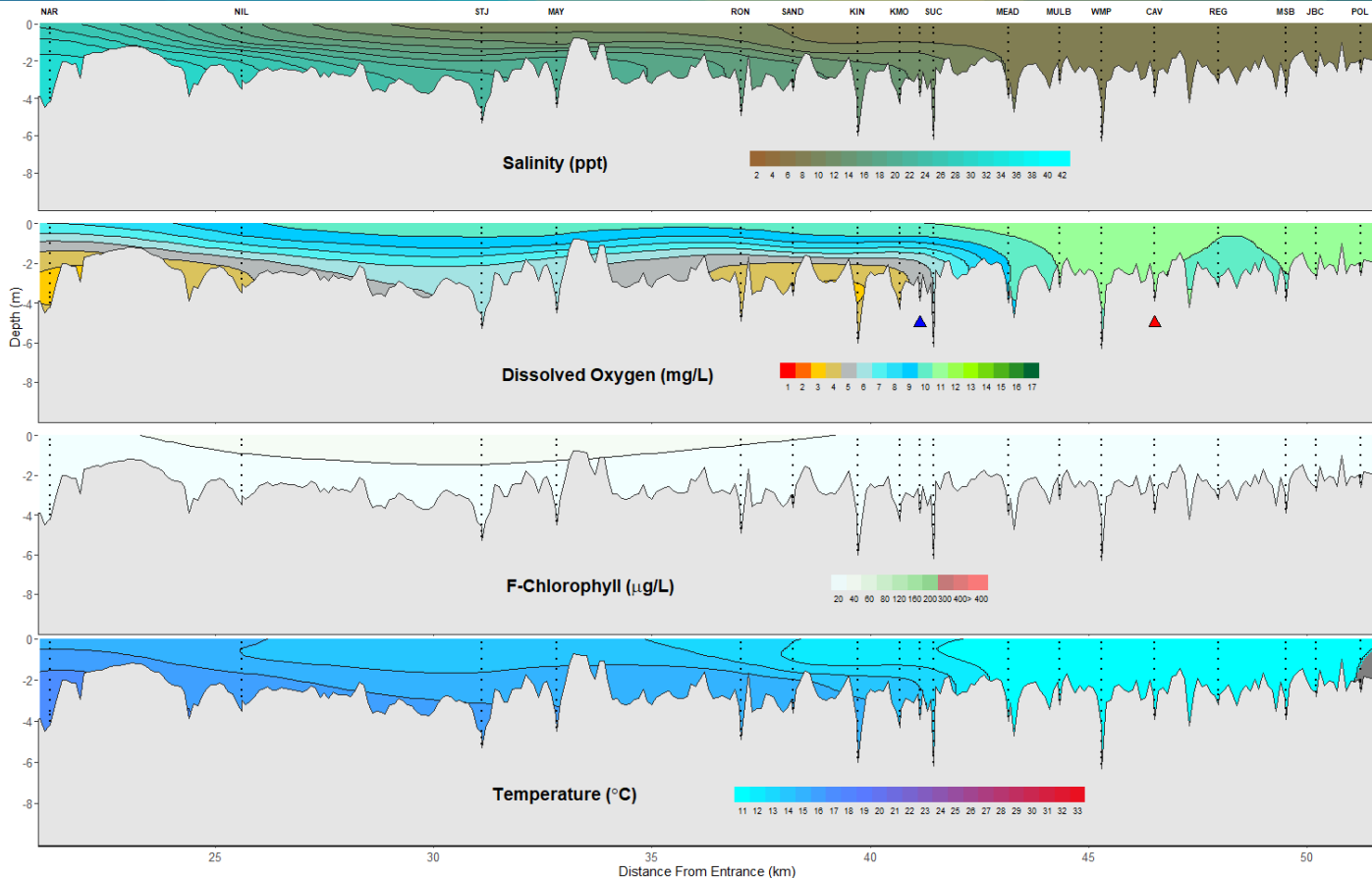
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Swan Canning Estuary - Water Quality Profiles – 3rd July 2023



Swan Canning Estuary - Water Quality Profiles – 3rd July 2023



Date: 3rd July 2023

Weather & tide conditions: Conditions were overcast with showers and a north westerly breeze of up to 14.9 knots. The predicted tides at Barrack St were 1.36 m at 10:43 am (high tide) and 0.63 m at 9:36 pm (low tide). Perth recorded 0.2 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was operable but not triggered to provide oxygen in the 24 hours prior to sampling. The Caversham oxygenation plant was offline in the 24 hours prior to sampling.

Lower Swan Canning Estuary (FP2.2 to NAR): The Lower Swan Canning Estuary was saline at FP2.2, FP7 and NAR and brackish over saline from BLA to HEA. Waters were oxygenated to well oxygenated, except for bottom waters at NAR which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 13.2 °C to 16.5 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline at NIL and brackish from STJ to RON. Waters were oxygenated to well oxygenated, except bottom waters at NIL and RON which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 12.5 °C to 15.6 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish. Waters were oxygenated to well oxygenated, except bottom waters from SAND to KMO which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 10 °C to 14.5 °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.
FP1 was not sampled due to unfavourable conditions.

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 60-150 µg L⁻¹, high 160-400 µg L⁻¹, extreme > 400 µg L⁻¹