



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

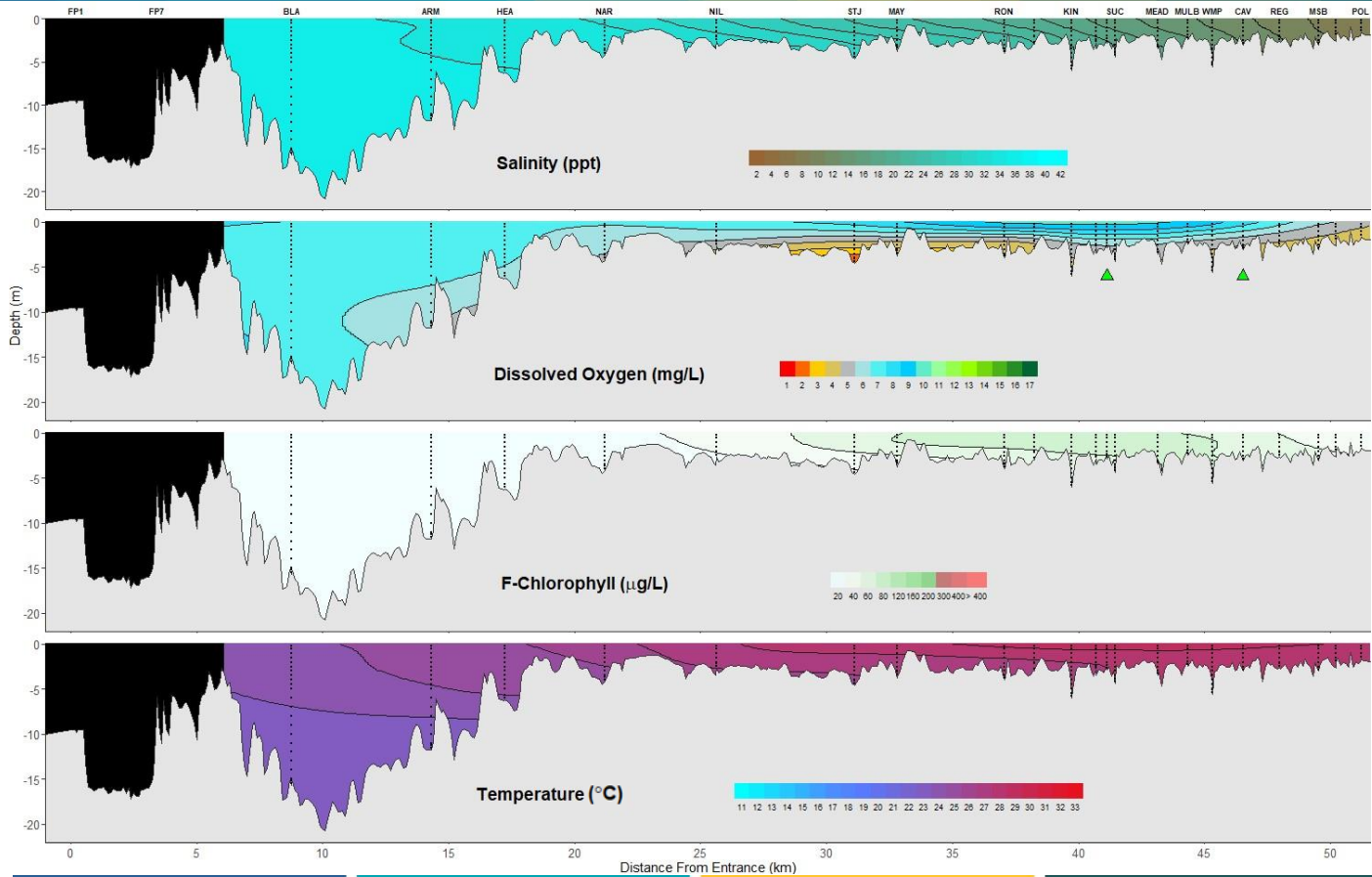
Lower Swan Canning Estuary to Upper Swan Estuary

27th November 2023

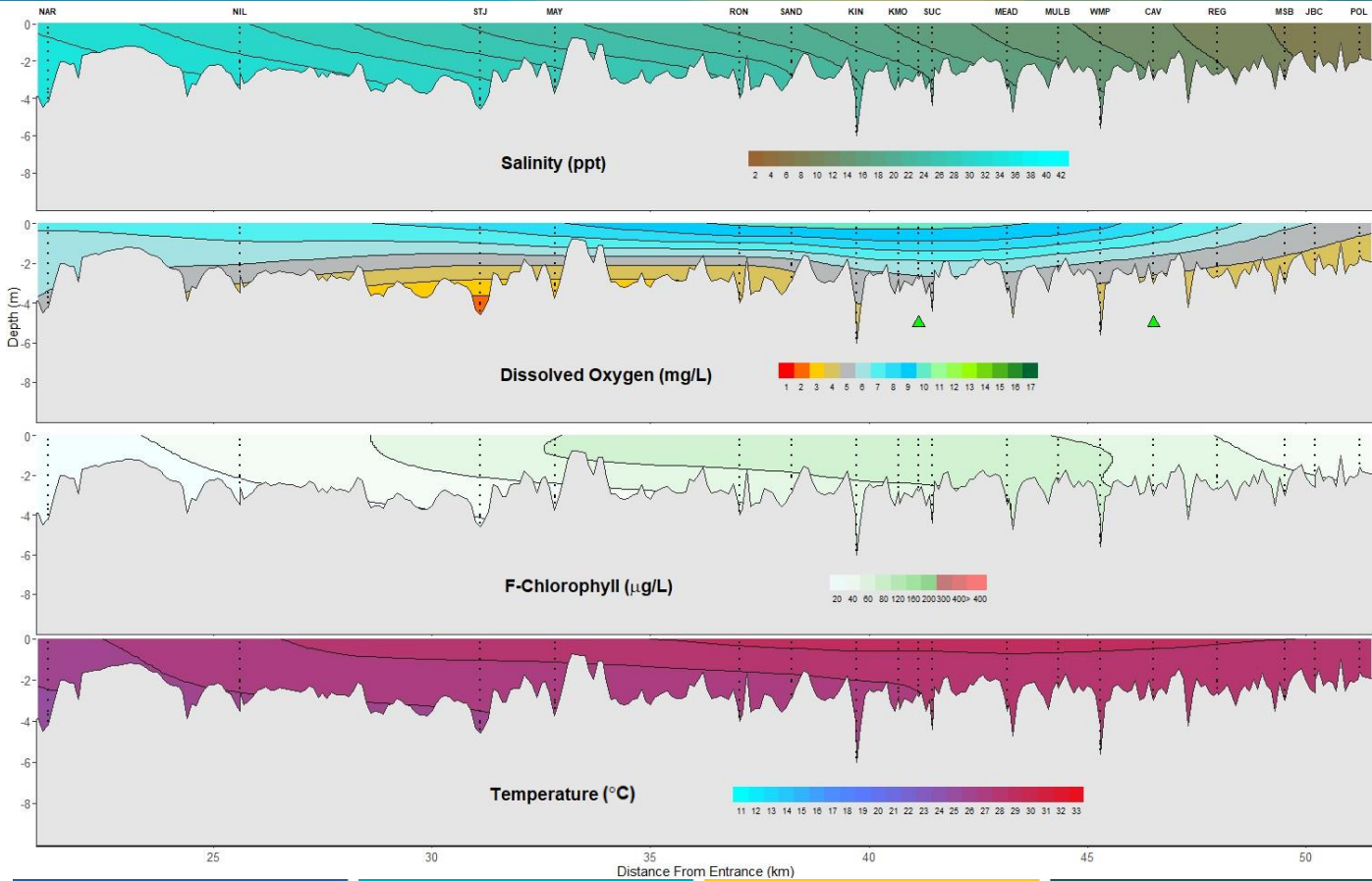
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Swan Canning Estuary - Water Quality Profiles – 27th November 2023



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Date: 27th November 2023

Weather & tide conditions: Conditions were overcast with a westerly breeze of up to 10.4 knots. The predicted tides at Barrack St were 0.50 m at 8:48 am (low tide) and 1.15 m at 10:30 pm (high tide). Perth recorded 0.4 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, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 22.3 °C to 25.5 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL, brackish over saline at STJ and brackish between MAY and RON. Surface waters were oxygenated or well oxygenated and bottom waters were hypoxic at STJ and low in oxygen from MAY to RON. Chlorophyll fluorescence was moderate in subsurface waters between STJ and MAY and surface waters at RON. Water temperatures ranged from 25.8 °C to 28.3 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated and bottom waters at SAND, KIN and MEAD to POL were low in oxygen. Chlorophyll fluorescence was moderate in the surface waters between SAND and VIT, moderate throughout the water column between SUC and REG and high in subsurface waters at KIN and KMO. Water temperatures ranged from 26.6 °C to 29.2 °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.

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