



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

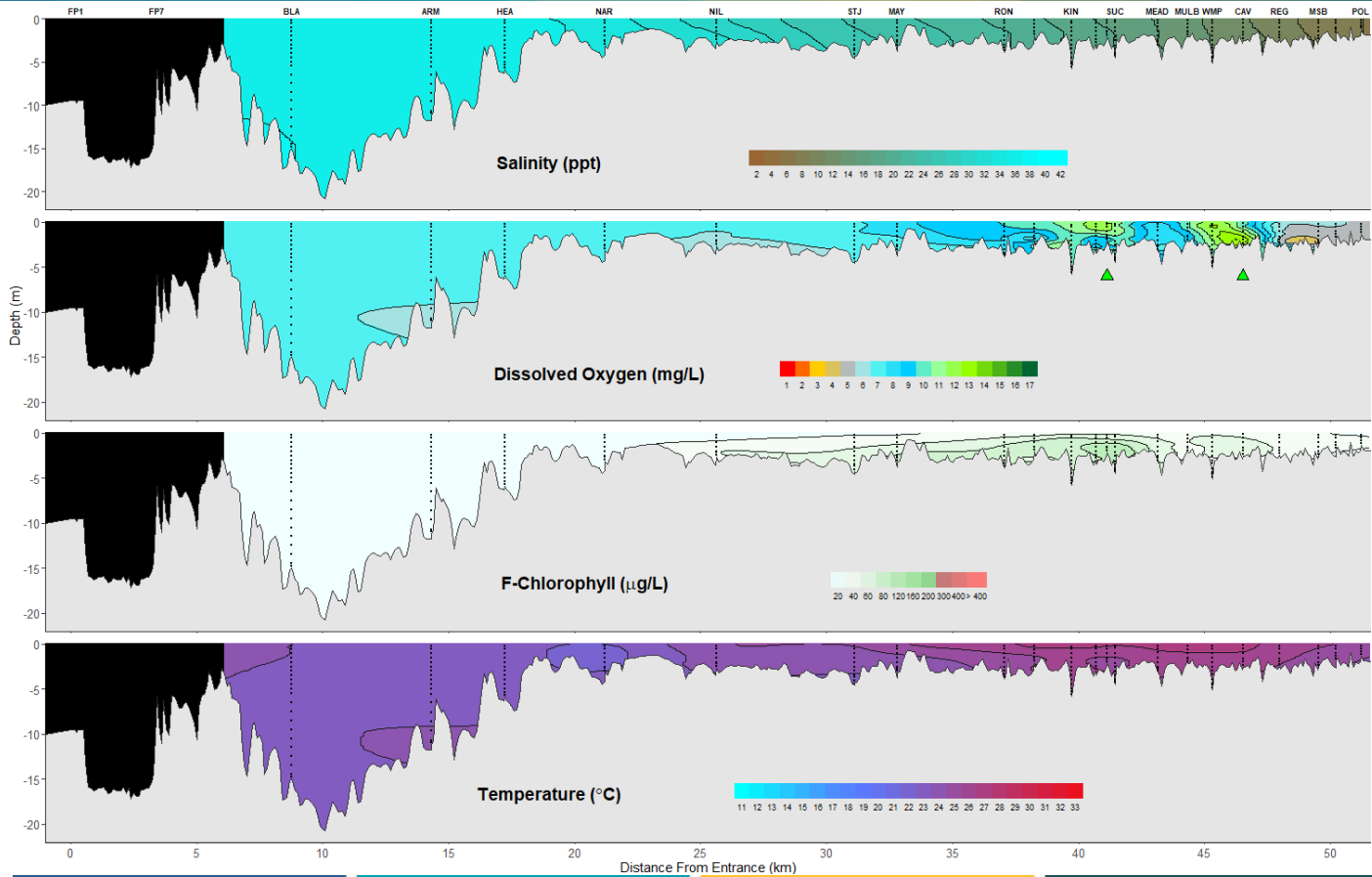
Lower Swan Canning Estuary to Upper Swan Estuary

11th December 2023

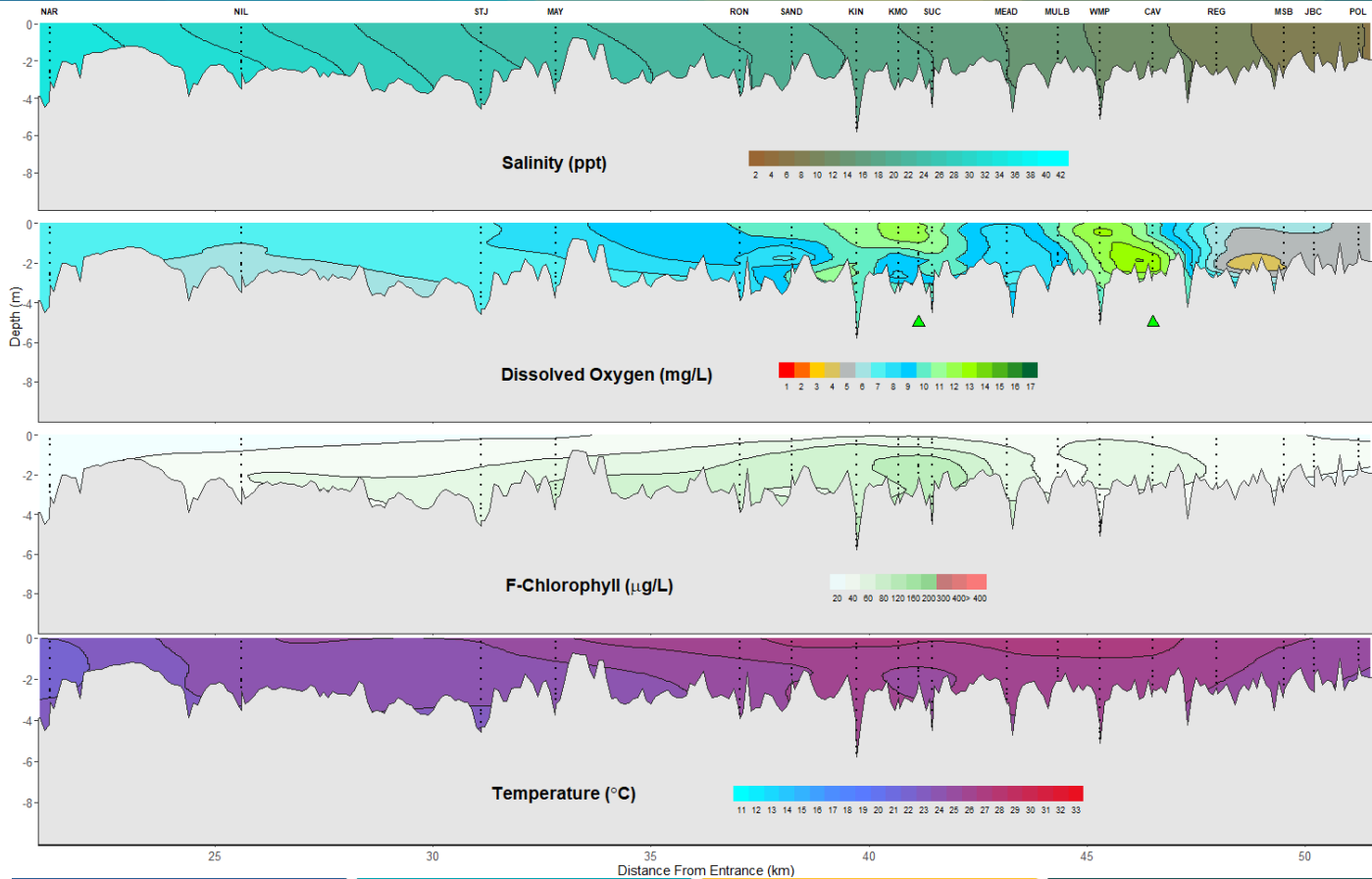
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Swan Canning Estuary - Water Quality Profiles – 11th December 2023



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Date: 11th December 2023

Weather & tide conditions: Conditions were sunny with an easterly breeze of up to 11.1 knots. The predicted tides at Barrack St were 0.54 m at 7:38 am (low tide) and 1.16 m at 9:12 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 at BLA, saline over hypersaline at ARM and saline at HEA and NAR. Waters were oxygenated or well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 21.7 °C to 23.1 °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 at MAY and RON. Waters were oxygenated or well oxygenated and chlorophyll fluorescence was moderate in subsurface and bottom waters from STJ to RON. Water temperatures ranged from 22.9 °C to 25.4 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish and waters were oxygenated or well oxygenated. Chlorophyll fluorescence was moderate in surface waters at KIN, VIT and MEAD, subsurface waters at KMO, SUC and WMP and bottom waters from SAND to SUC and at CAV. Water temperatures ranged from 24.1 °C to 26.6 °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