



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

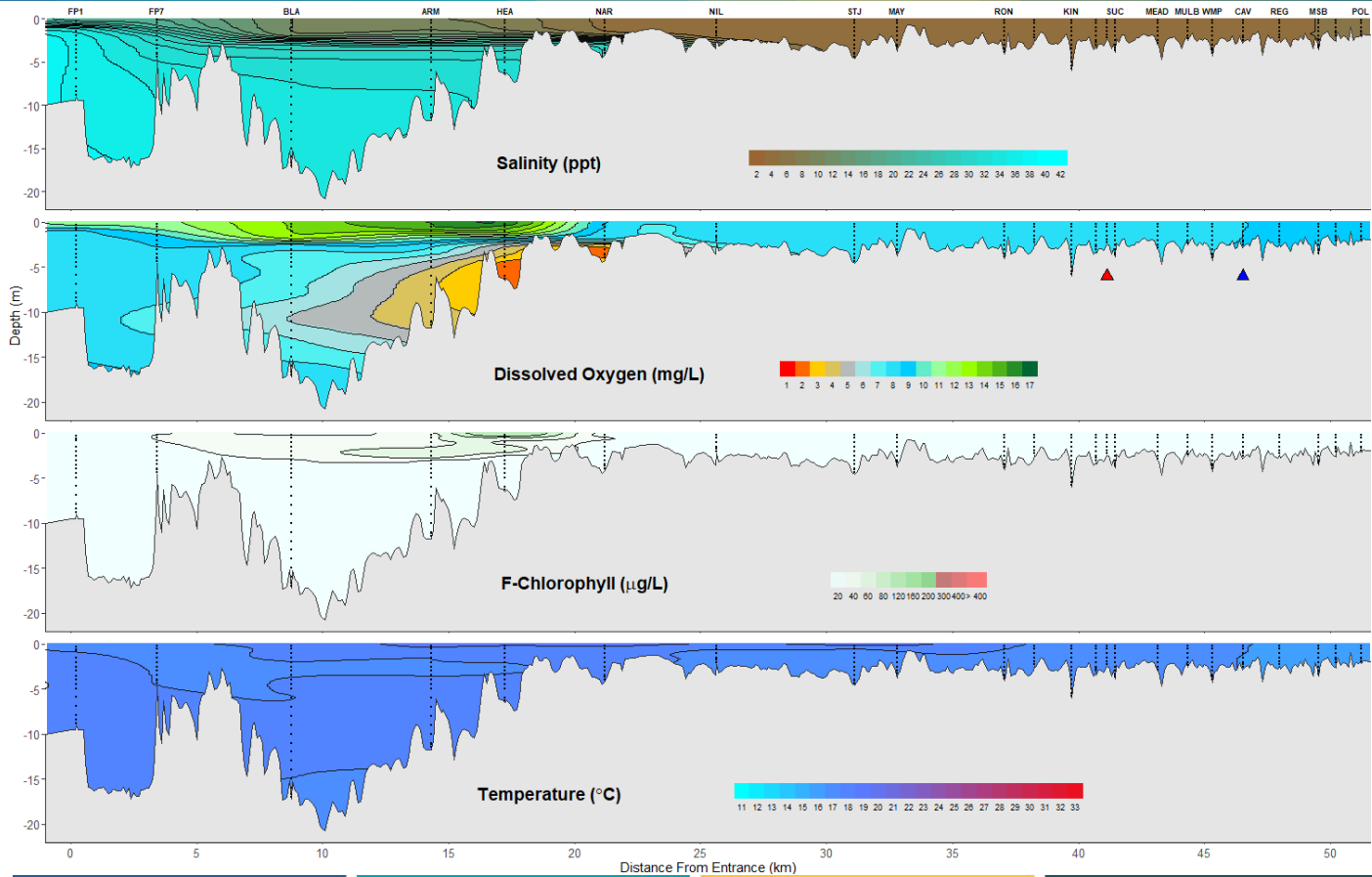
Lower Swan Canning Estuary to Upper Swan Estuary

9th September 2024

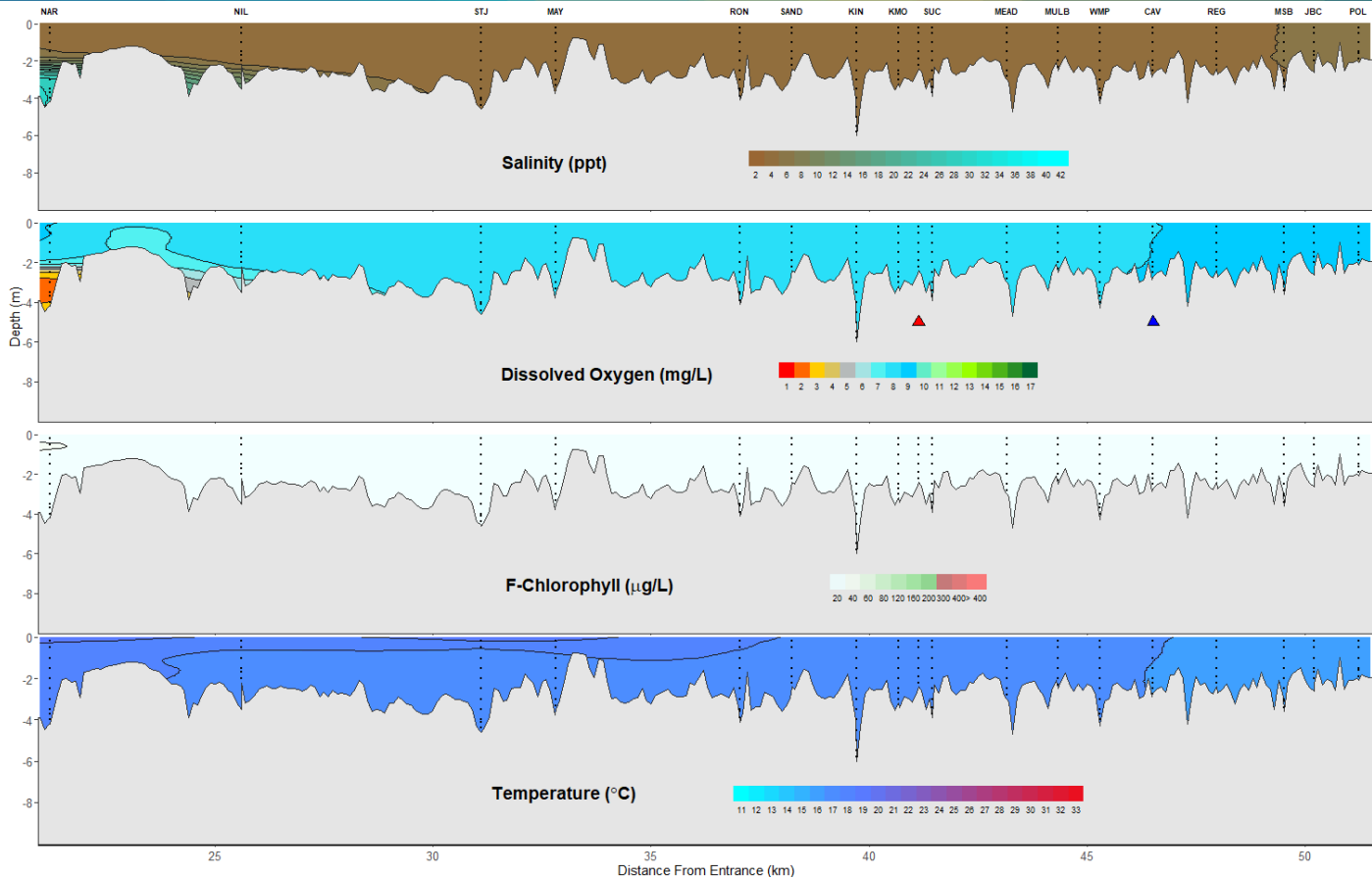
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Swan Canning Estuary - Water Quality Profiles – 9th September 2024



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Date: 9th September 2024

Weather & tide conditions: Conditions were cloudy with a predominately westerly breeze of up to 6.6 knots. The predicted tides at Barrack St were 1.04 m at 1:41 am (high tide) and 0.70 m at 4:49 pm (low tide). Perth recorded 26.2 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (FPI to NAR): The Lower Swan Canning Estuary was brackish over hypersaline at FP1, brackish over saline from BLA to HEA and fresh over saline at NAR. Waters were oxygenated or well oxygenated, except bottom waters at ARM which were low in oxygen and HEA and NAR which were hypoxic. Chlorophyll fluorescence was moderate in sub-surface waters of ARM and surface waters at HEA. Water temperatures ranged from 16.8 to 18.2 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was fresh, waters were well oxygenated and chlorophyll fluorescence was low. Water temperatures ranged from 16.2 to 18 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was fresh and waters were well oxygenated. Chlorophyll fluorescence was low and water temperatures ranged from 15.7 to 16.9 °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 < 60 µg L⁻¹, moderate 60-160 µg L⁻¹, high 160-400 µg L⁻¹, extreme > 400 µg L⁻¹