



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

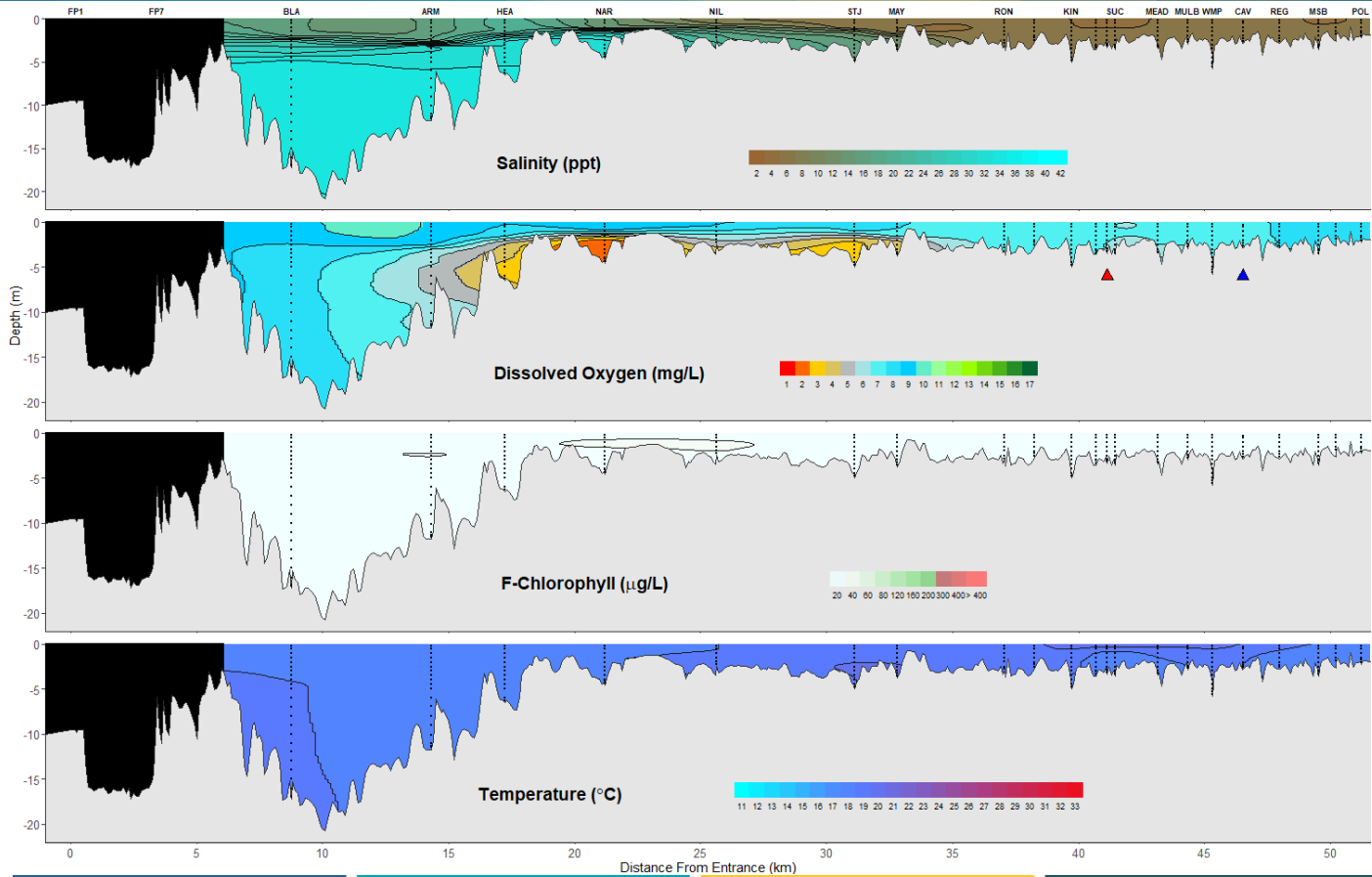
Lower Swan Canning Estuary to Upper Swan Estuary

16th September 2024

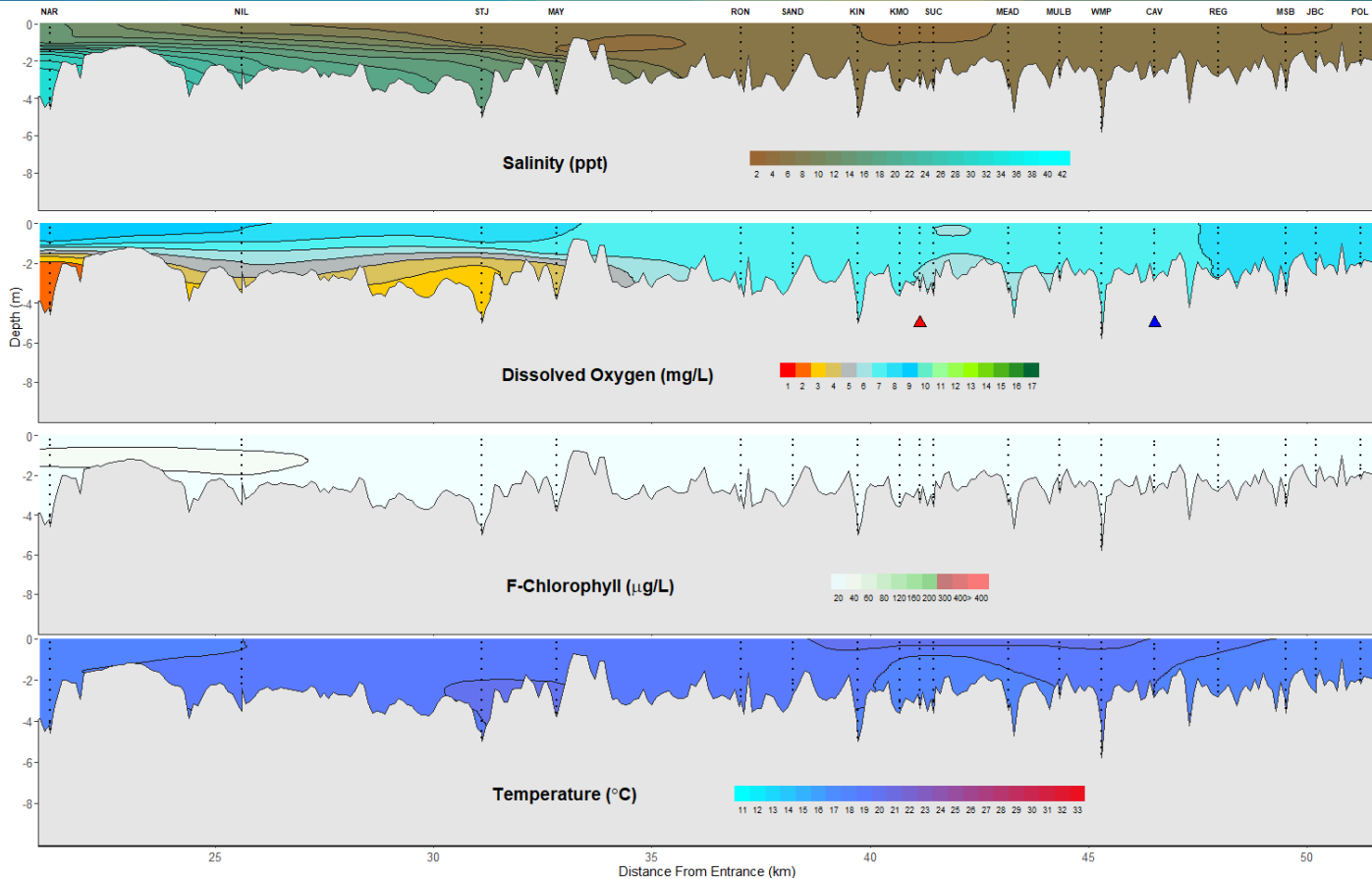
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Swan Canning Estuary - Water Quality Profiles – 16th September 2024



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Date: 16th September 2024

Weather & tide conditions: Conditions were sunny with a predominately north-easterly breeze of up to 16 knots. The predicted tides at Barrack St were 1.1 m at 9:53 am (high tide) and 0.63 m at 6:50 pm (low tide). Perth recorded no 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 (BLA to NAR): The Lower Swan Canning Estuary was brackish over saline. Waters were oxygenated or well oxygenated, except bottom waters at HEA which were low in oxygen and NAR which were hypoxic. Chlorophyll fluorescence was low and water temperatures ranged from 17.3 to 18.1 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish at NIL, fresh over brackish from STJ to MAY and fresh at RON. Waters were oxygenated to well oxygenated, except bottom waters at MAY which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 17.9 to 19.1 °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 17.3 to 19.5 °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

Recommended reference: Department of Biodiversity, Conservation and Attractions, 2024. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 16th September 2024*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)