

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

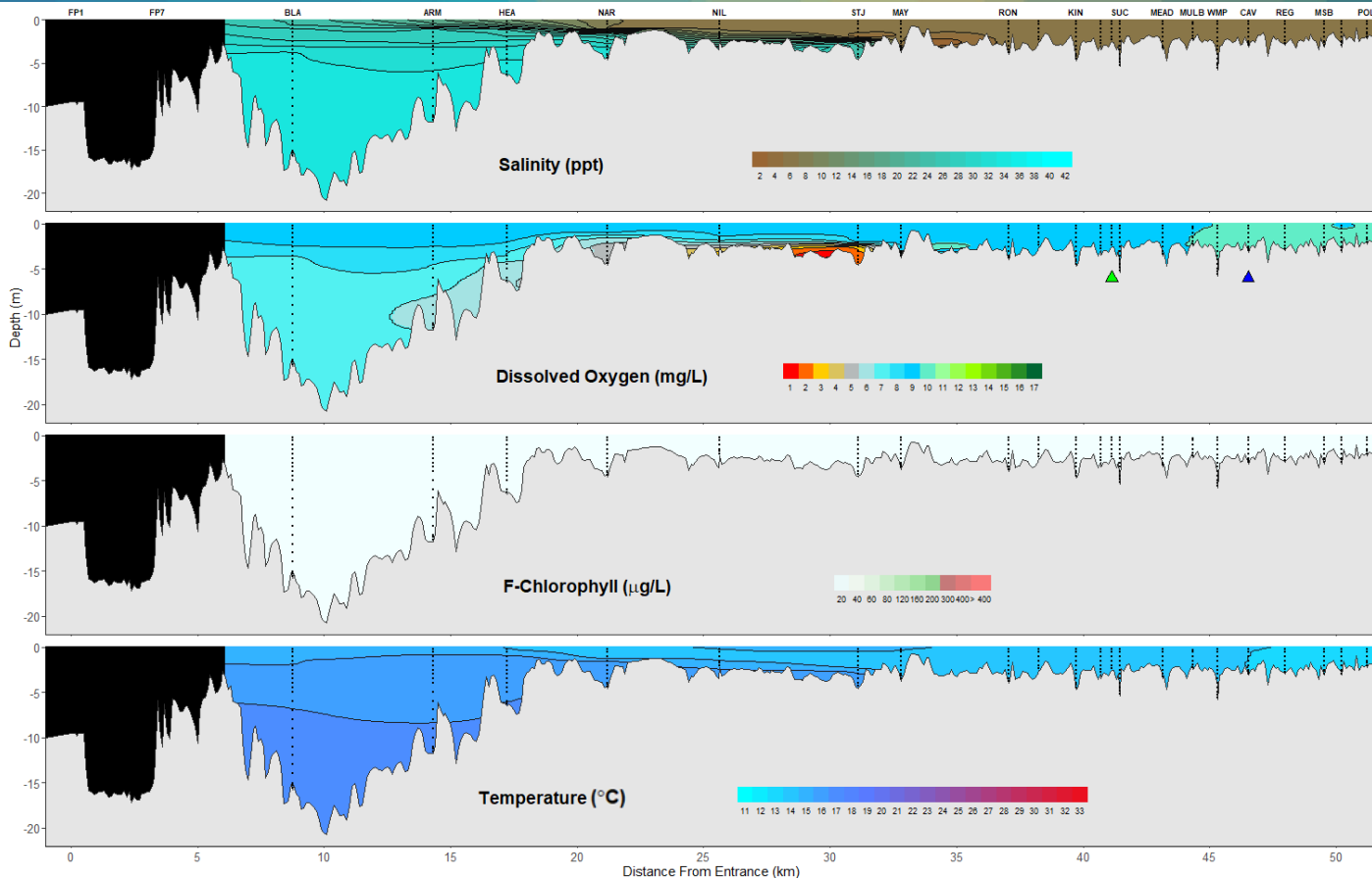
Lower Swan Canning Estuary to Upper Swan Estuary

12th June 2023

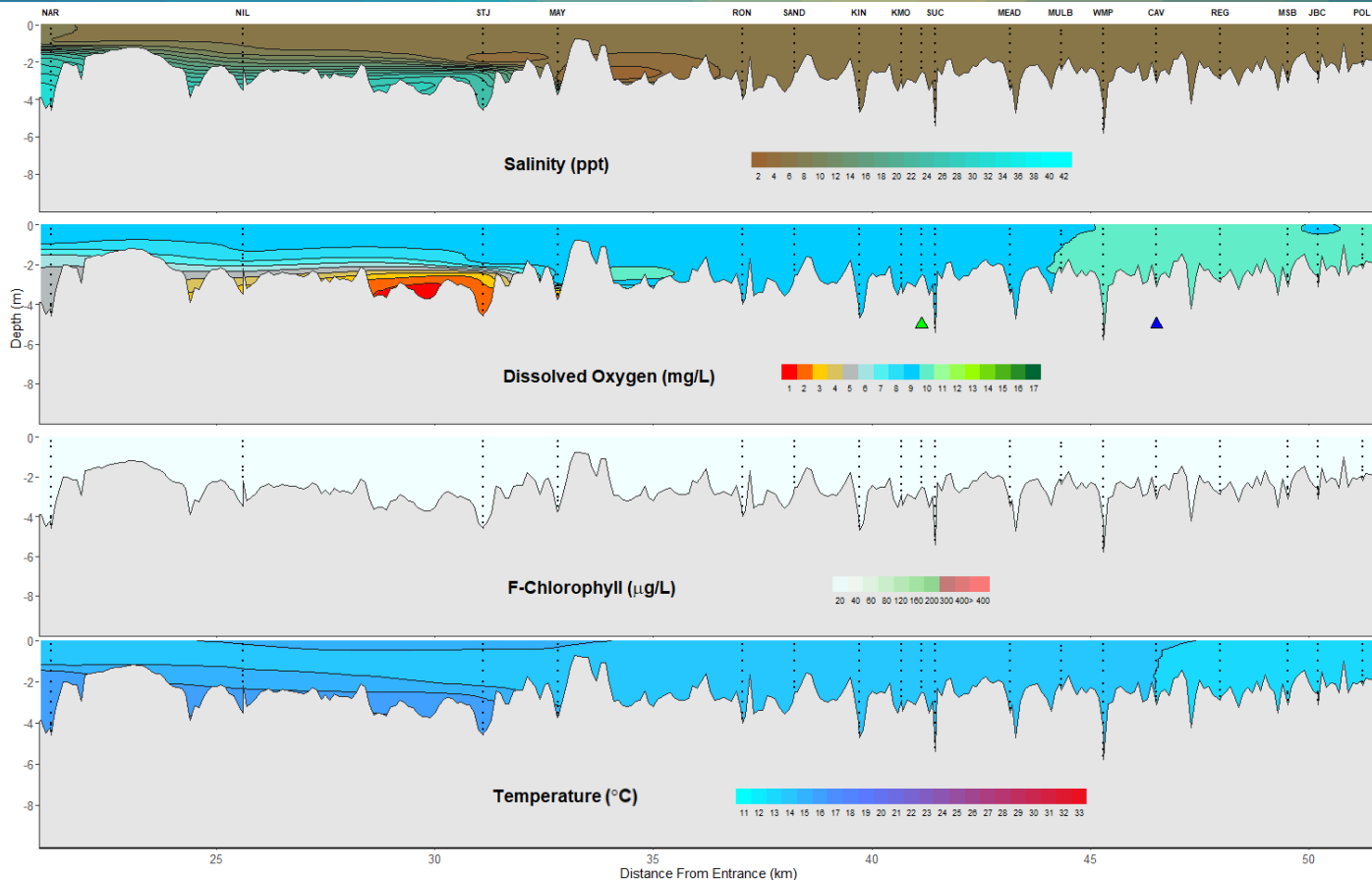
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Swan Canning Estuary - Water Quality Profiles – 12th June 2023



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Date: 12th June 2023

Weather & tide conditions: Conditions were overcast with a variable easterly breeze of up to 5.3 knots. The predicted tides at Barrack St were 1.07 m at 9:24 am (high tide) and 0.9 m at 11:18 pm (low tide). Perth recorded 162.2 mm of rainfall in the week prior to sampling (Bureau of Meteorology), with 71.2 mm recorded on 5 June, being the highest recorded June daily rainfall.

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

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was brackish over saline, and waters were oxygenated to well oxygenated. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 13.5 °C to 16.2 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish at NIL, fresh over brackish between STJ and MAY, and fresh at RON. Waters were oxygenated to well oxygenated at NIL and RON, and in the surface waters of STJ and MAY, while the bottom waters to mid column of MAY were low in oxygen, and hypoxic to low in oxygen at STJ. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 13.5 °C to 15. °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was fresh between SAND and WMP, fresh over brackish at JBC, brackish at all other sites. Waters were well oxygenated and chlorophyll fluorescence was low throughout. Water temperatures ranged from 12.9 °C to 13.8 °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 < 60 µg L⁻¹, moderate 60-150 µg L⁻¹, high 160-400 µg L⁻¹, extreme > 400 µg L⁻¹