



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

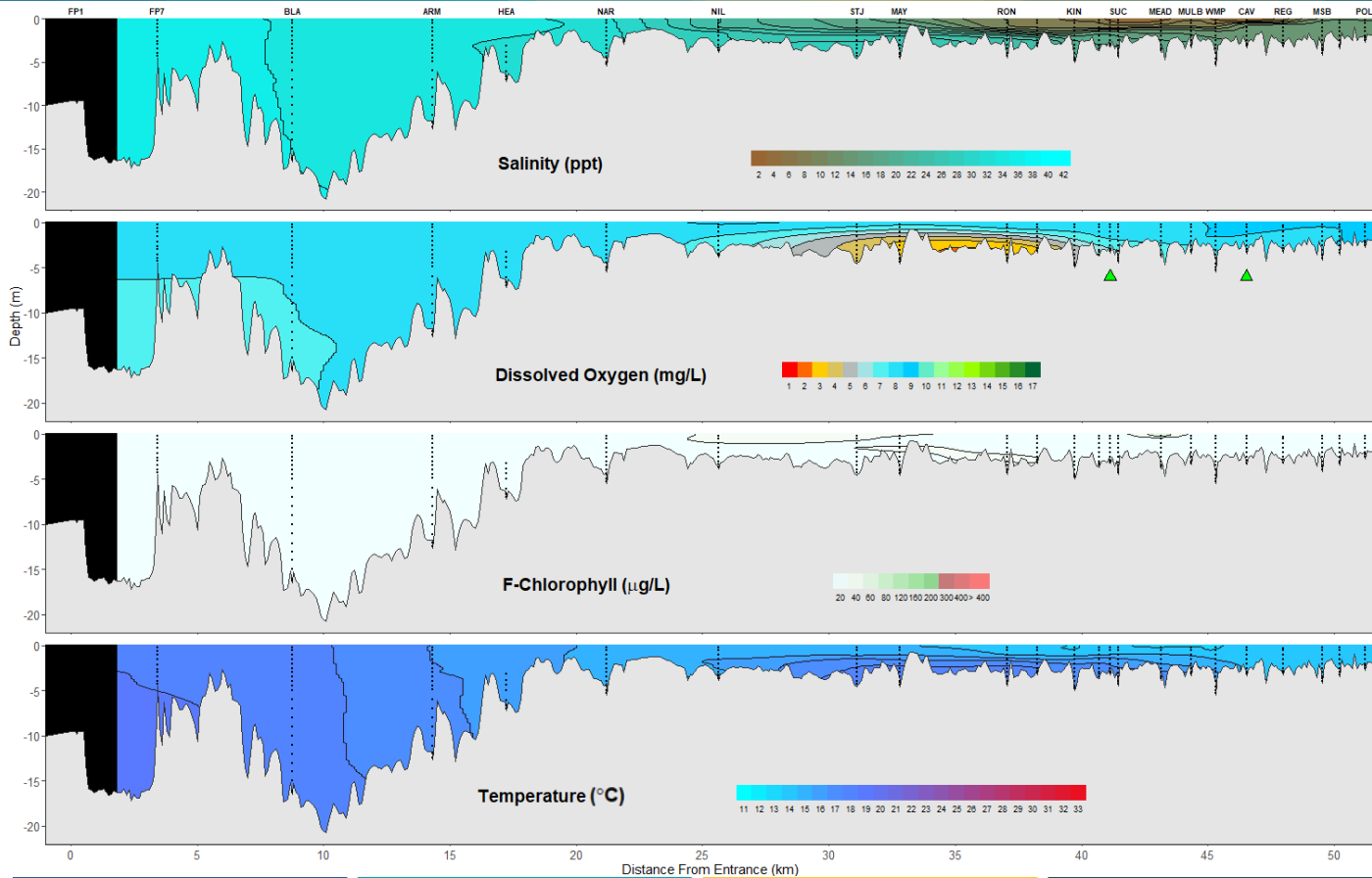
Lower Swan Canning Estuary to Upper Swan Estuary

6th June 2023

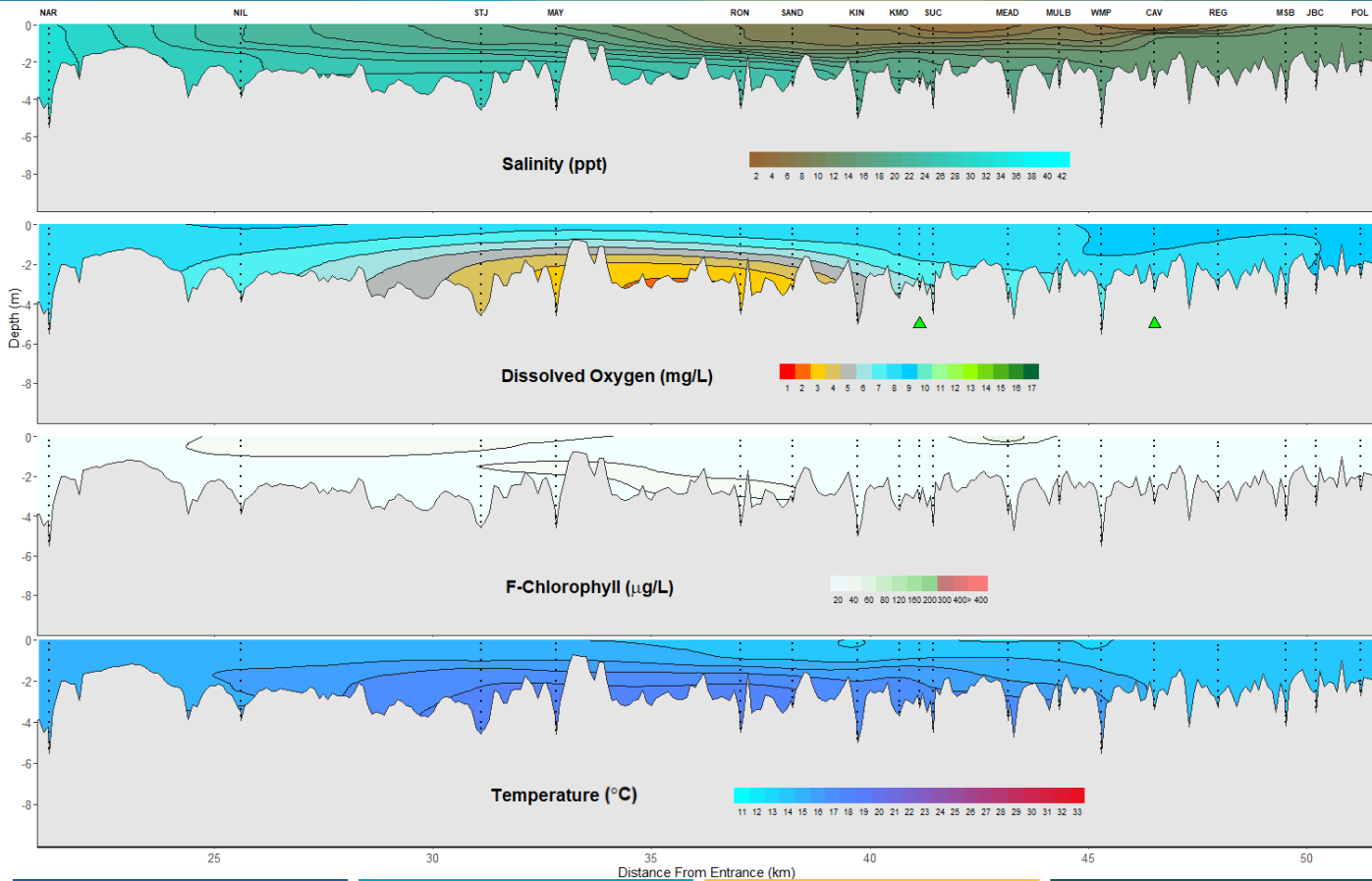
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Swan Canning Estuary - Water Quality Profiles – 6th June 2023



Swan Canning Estuary - Water Quality Profiles – 6th June 2023



Date: 6th June 2023

Weather & tide conditions: Conditions were stormy with a variable westerly breeze of up to 16.5 knots. The predicted tides at Barrack St were 1.36 m at 12:21 pm (high tide) and 0.65 m at 11:22 pm (low tide). Perth recorded 81.4 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 and Caversham oxygenation plants were operating and provided oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (FPI to NAR): The Lower Swan Canning Estuary was saline, and waters were oxygenated to well oxygenated. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 14.7 °C to 17.9 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline between NIL and MAY and brackish at RON. Waters were oxygenated to well oxygenated at NIL and the surface waters between STJ and RON, while the bottom waters to mid column were low in oxygen at STJ and MAY, and hypoxic to low in oxygen at MAY. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 12.9 °C to 17.4 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was fresh over brackish between SUC and KIN, and brackish at all other sites. Waters were oxygenated to well oxygenated throughout except for SAND, where bottom waters were low in oxygen. Chlorophyll fluorescence was low throughout, and water temperatures ranged from 12.9 °C to 17.3 °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. Due to difficult conditions in the lower Swan, FP1 was not sampled and HEA was aborted part way through.

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