



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

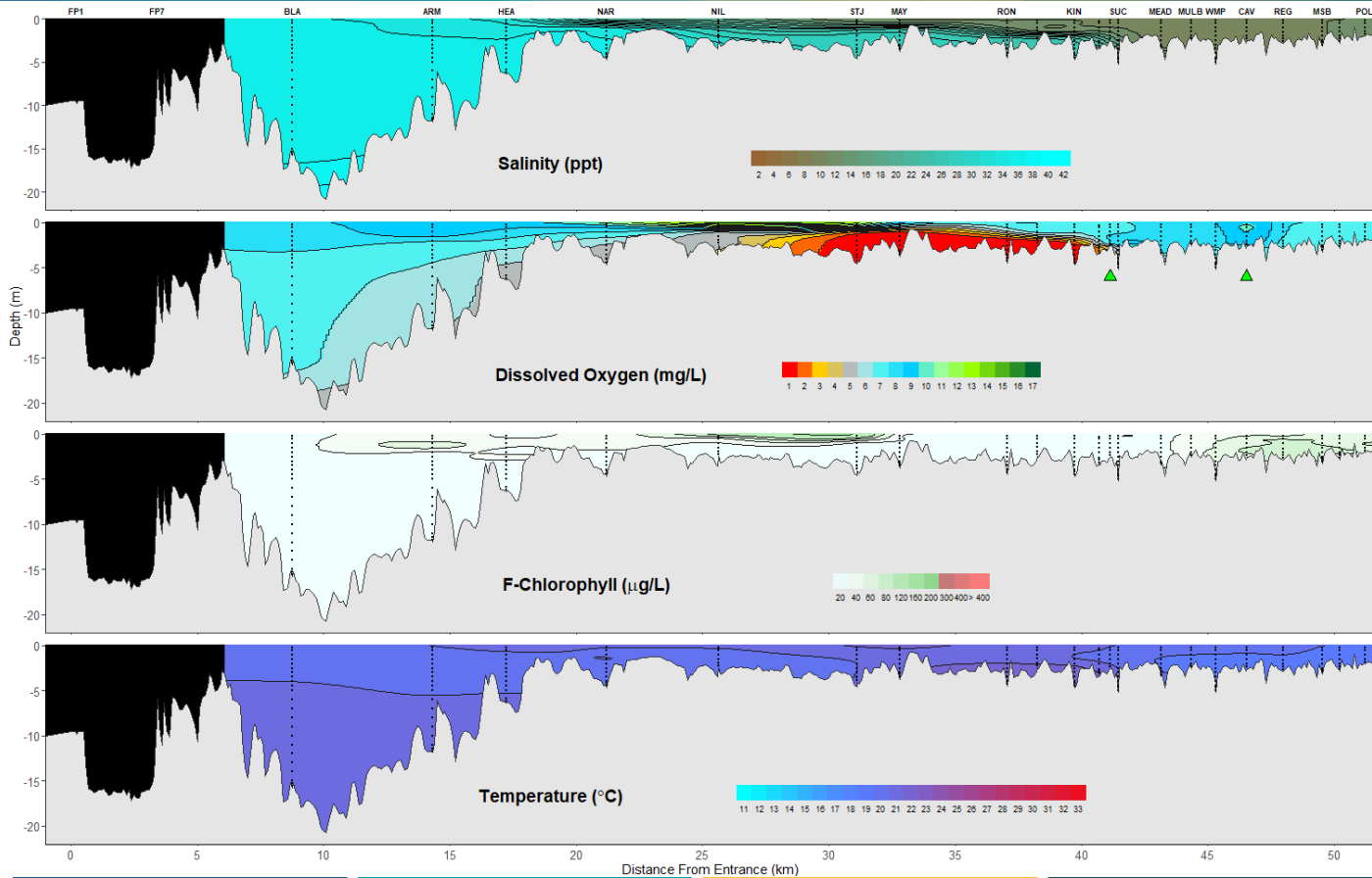
Lower Swan Canning Estuary to Upper Swan Estuary

17th April 2023

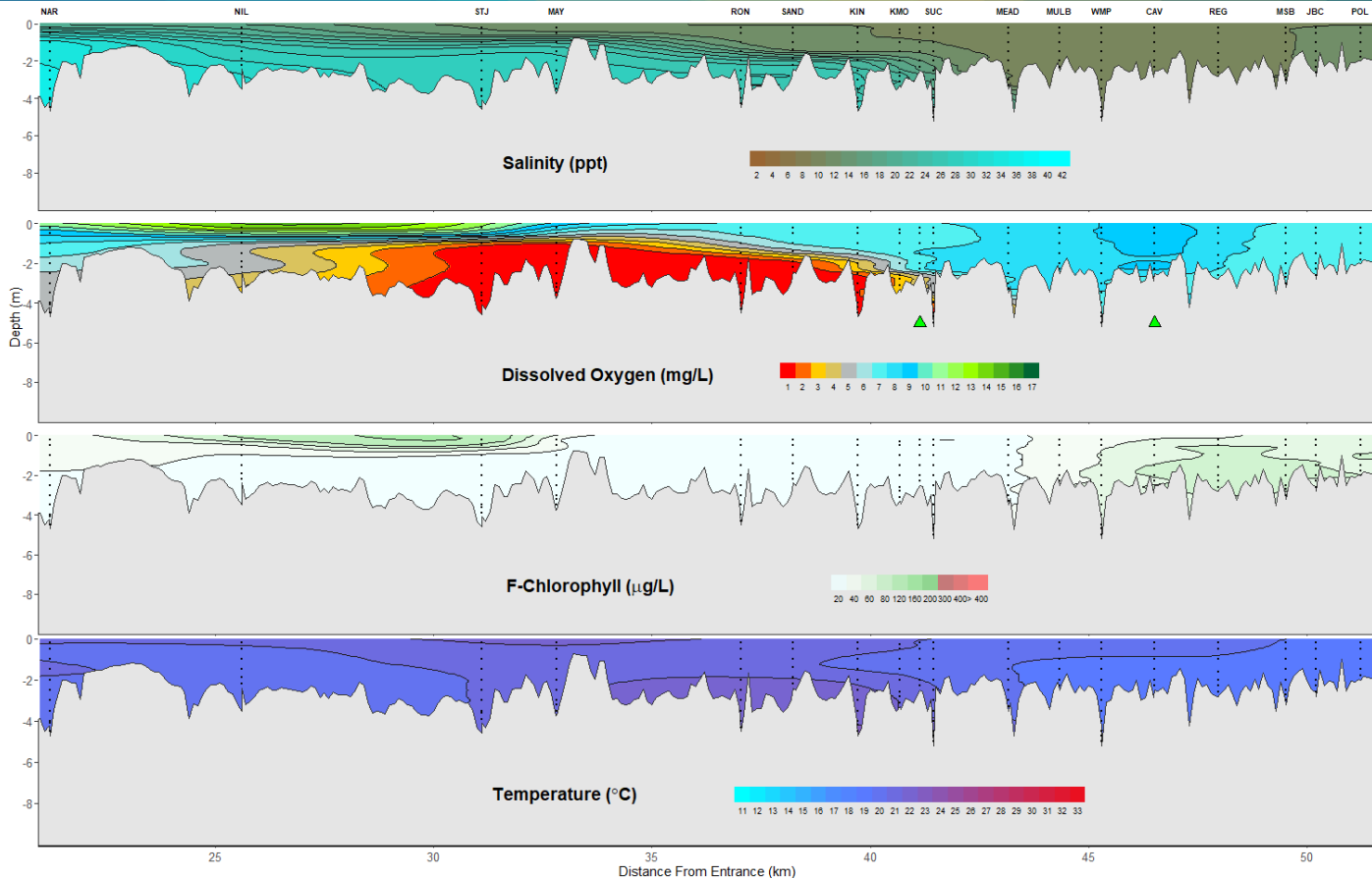
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Swan Canning Estuary - Water Quality Profiles – 17th April 2023



Swan Canning Estuary - Water Quality Profiles – 17th April 2023



Date: 17th April 2023

Weather & tide conditions: Conditions were partly cloudy with a variable breeze of up to 8 knots. The predicted tides at Barrack St were 0.72 m at 5:04 am (low tide) and 0.95 m at 11:45 pm (high tide). Perth recorded 29.2 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were both operable and providing oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline over hypersaline from BLA to ARM and brackish over saline at NAR. Waters in this zone were oxygenated to well oxygenated and chlorophyll fluorescence was moderate in the surface waters at ARM but low otherwise. Water temperatures ranged from 19.6 °C to 20.3 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL brackish over saline throughout. Surface waters were oxygenated to well oxygenated however deeper waters were anoxic from STJ to RON. Chlorophyll fluorescence was moderate in the surface waters between NIL and STJ. Water temperatures ranged from 19.5 to 21.2 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish at SAND, brackish over saline at KIN, brackish from KMO to VIT, brackish over saline at SUC and then brackish between MEAD and POL. Surface waters were oxygenated throughout however bottom waters ranged from anoxic (SAND and KIN) to hypoxic (KMO and SUC), to oxygenated (MEAD to POL) and well oxygenated at CAV. Chlorophyll fluorescence was moderate throughout the water column between CAV and POL. Water temperatures ranged from 18.6 °C to 22.3 °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.

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 (low flow): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹