



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

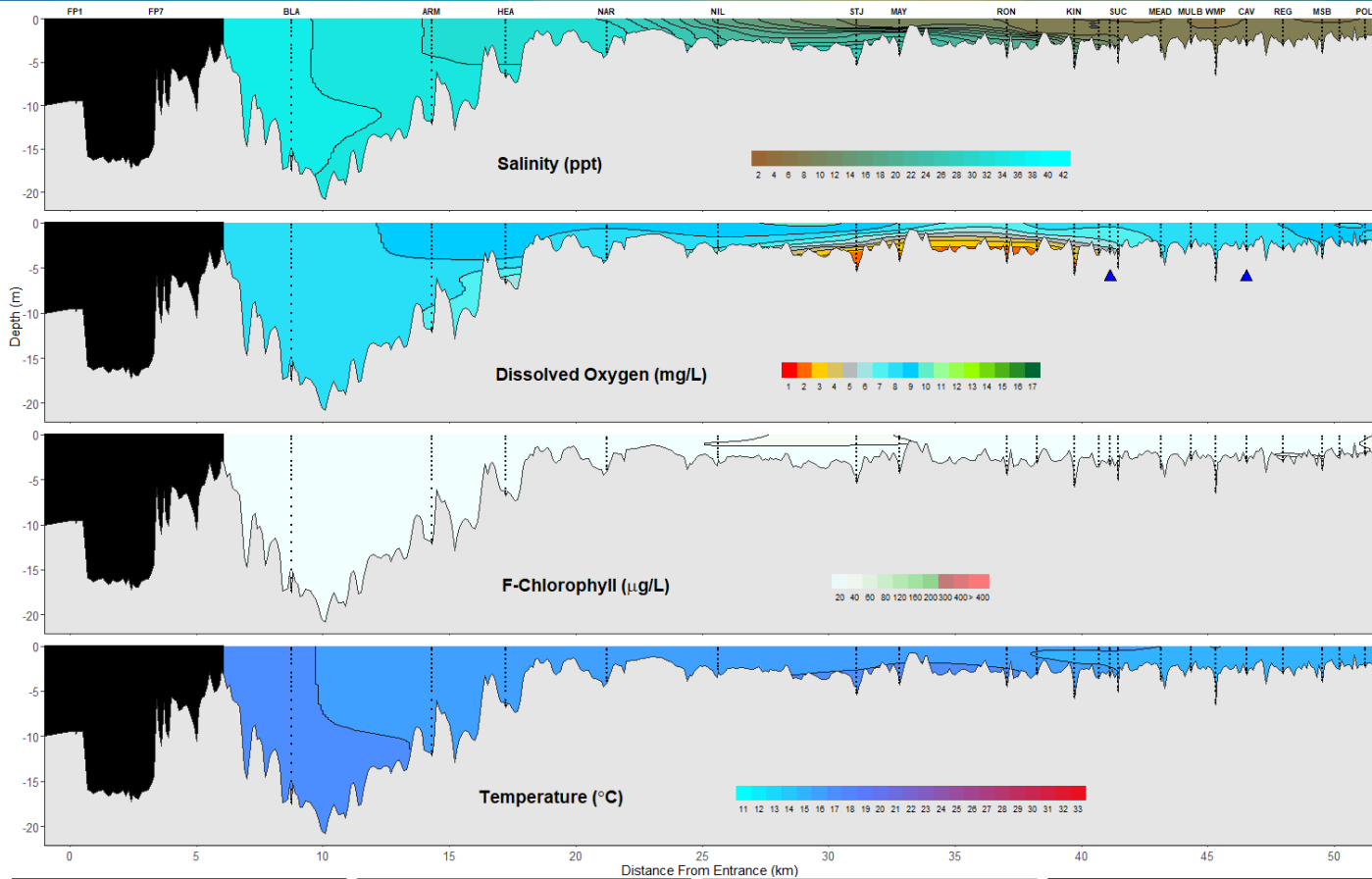
Lower Swan Canning Estuary to Upper Swan Estuary

22nd July 2024

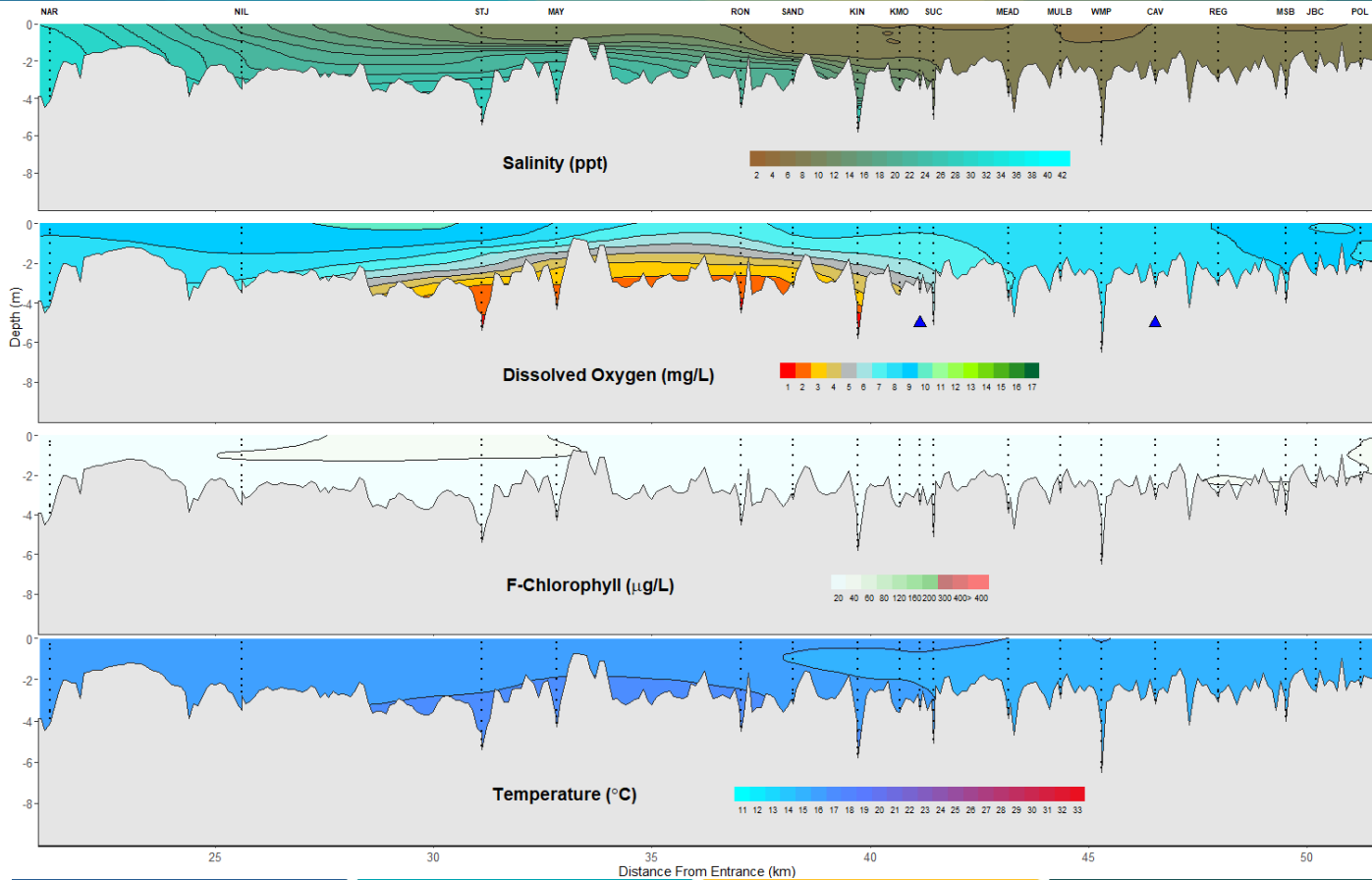
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Swan Canning Estuary - Water Quality Profiles – 22nd July 2024



Swan Canning Estuary - Water Quality Profiles – 22nd July 2024



Date: 22nd July 2024

Weather & tide conditions: Conditions were overcast with a predominately north-westerly breeze of up to 14 knots. The predicted tides at Barrack St were 1.31 m at 11:37 am (high tide) and 0.66 m at 10:01 pm (low tide). Perth recorded 56.2 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were 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 saline, waters were oxygenated or well oxygenated, and chlorophyll fluorescence was low. Water temperatures ranged from 15.1 to 16.3 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish except at STJ, which was brackish over saline. Bottoms waters were anoxic at STJ and RON, low in oxygen at MAY, and well oxygenated at NIL. Surface layers were well oxygenated throughout. Chlorophyll fluorescence was low and water temperatures ranged from 15.0 to 16.6 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline at KIN, fresh over brackish at WMP, and brackish throughout the remainder of sites. Bottom waters were anoxic at KIN, hypoxic at SANDBR and low in oxygen at KMO, while the remaining sites were oxygenated or well oxygenated. Chlorophyll fluorescence was low and water temperatures ranged from 14.1 to 16.4 °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 (low flow): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹