



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

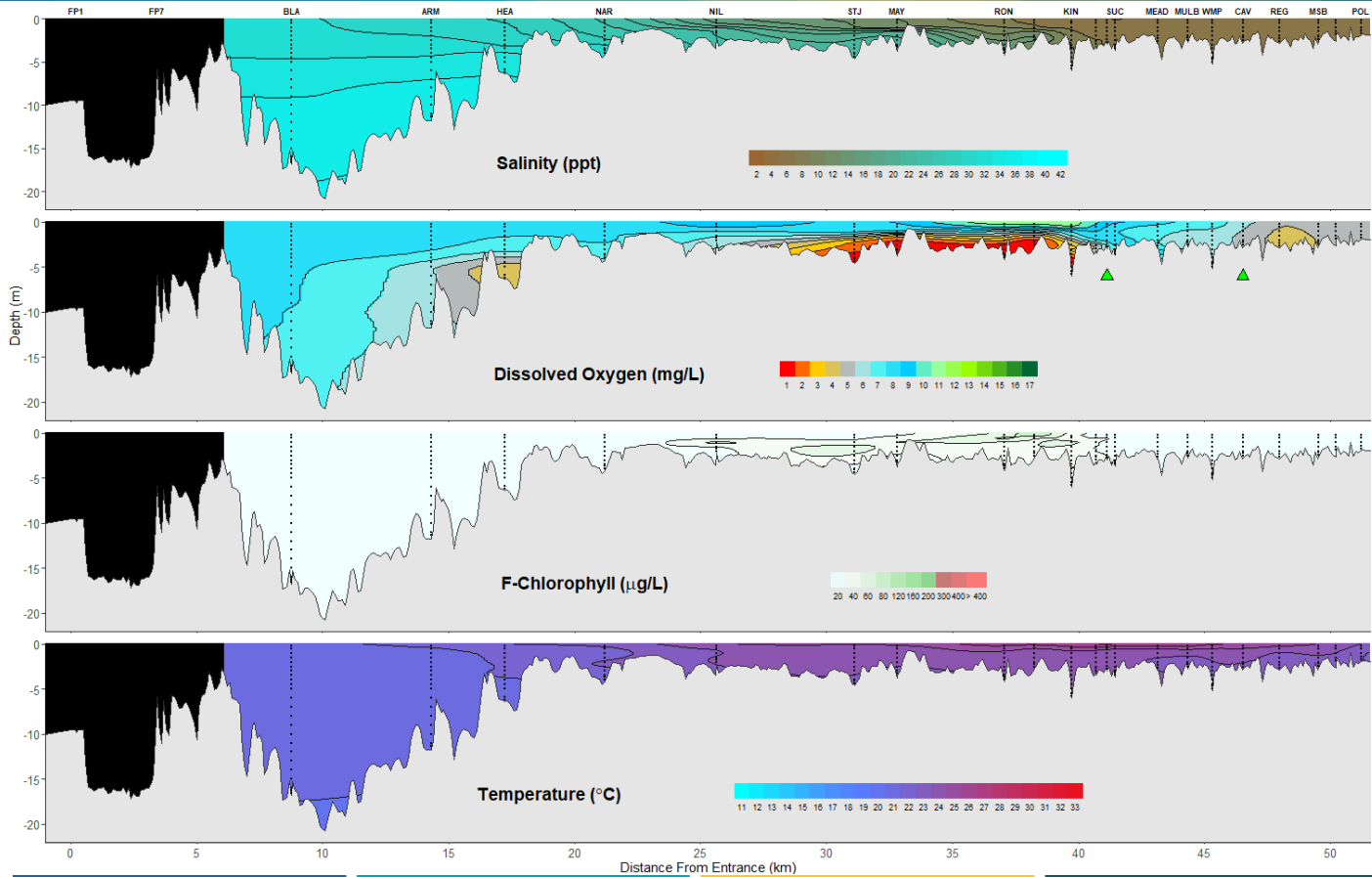
Lower Swan Canning Estuary to Upper Swan Estuary

11 November 2024

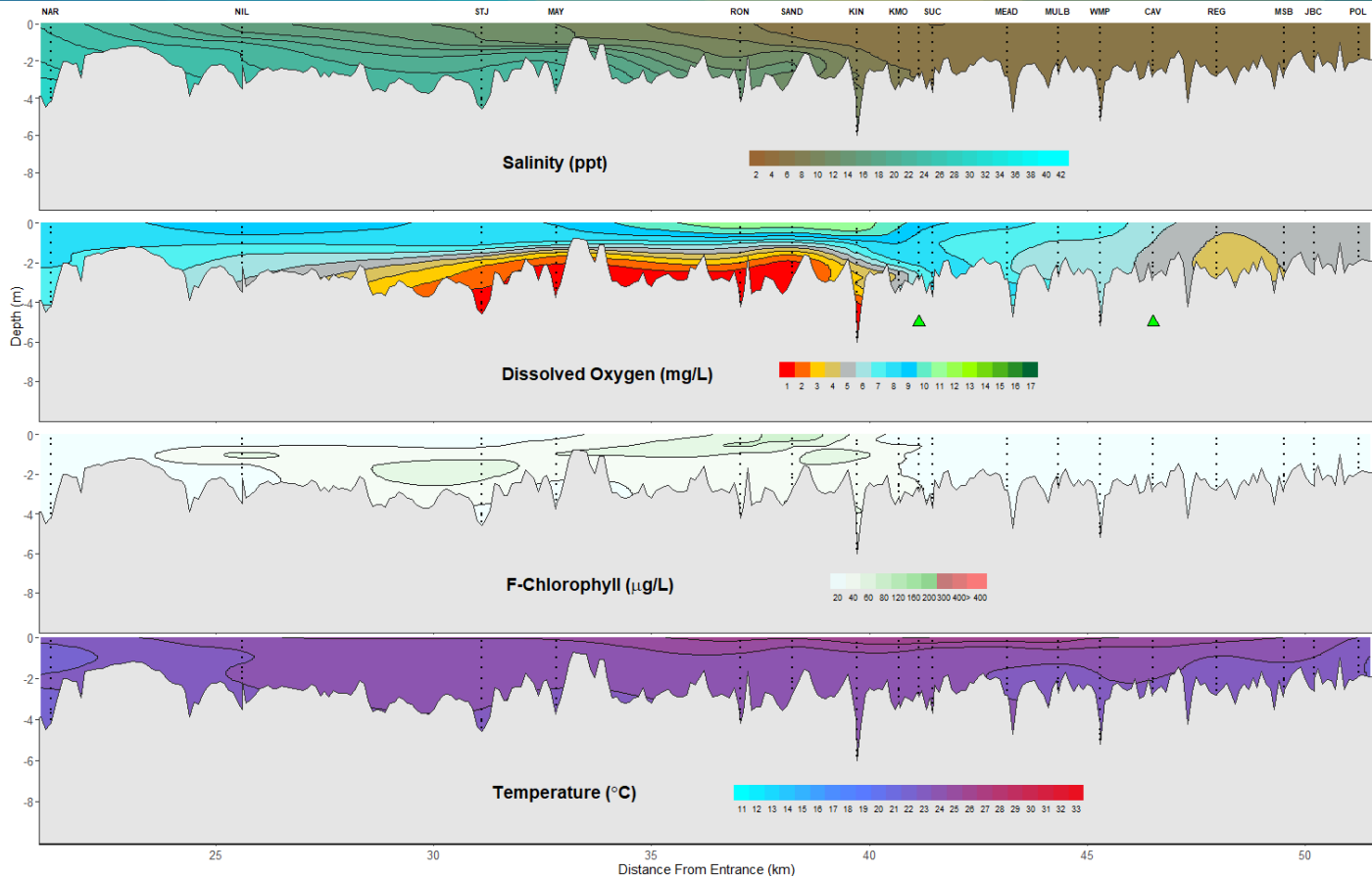
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Swan Canning Estuary - Water Quality Profiles – 11 November 2024



Swan Canning Estuary - Water Quality Profiles – 11 November 2024



Date: 11 November 2024

Weather & tide conditions: Conditions were clear with a variable breeze of up to 10.1 knots. The predicted tides at Barrack St were 0.85 m at 2:25 am (low tide), 0.87 m at 6:02 am (high tide), 0.67 at 2:51 pm (second low tide) and 0.89 m at 9:41 pm (second high tide). Perth recorded 2.4 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plant were triggered to provide oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline from BLA to HEA and brackish over saline at NAR. Waters were oxygenated or well oxygenated, except bottoms waters at HEA which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 20.1 to 22.2 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish. Waters were oxygenated or well oxygenated, except bottom waters from STJ to RON which were anoxic. Chlorophyll fluorescence was moderate in surface waters at RON and water temperatures ranged from 22.9 to 25.0 °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, fresh over brackish from KMO to SUC and fresh from MEAD - POL. Waters were oxygenated or well oxygenated, except bottom waters at SAND and KIN which were anoxic, KMO which were low in oxygen and surface to bottom waters at REG which were low in oxygen. Chlorophyll fluorescence was moderate in surface waters at SAND. Water temperatures ranged from 21.6 to 25.6 °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

Recommended reference: Department of Biodiversity, Conservation and Attractions, 2024. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 11 November 2024*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)