



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

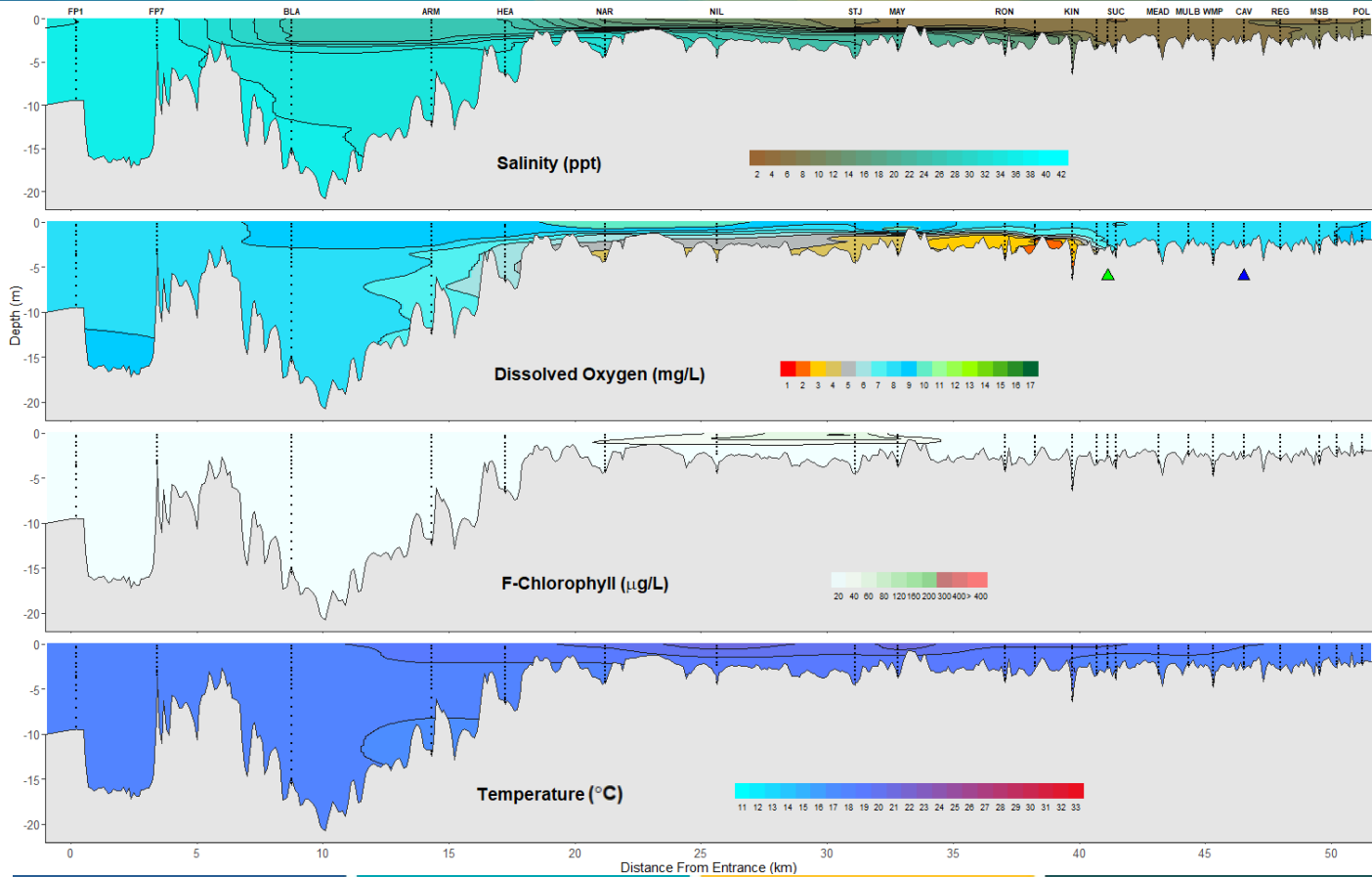
Lower Swan Canning Estuary to Upper Swan Estuary

11th September 2023

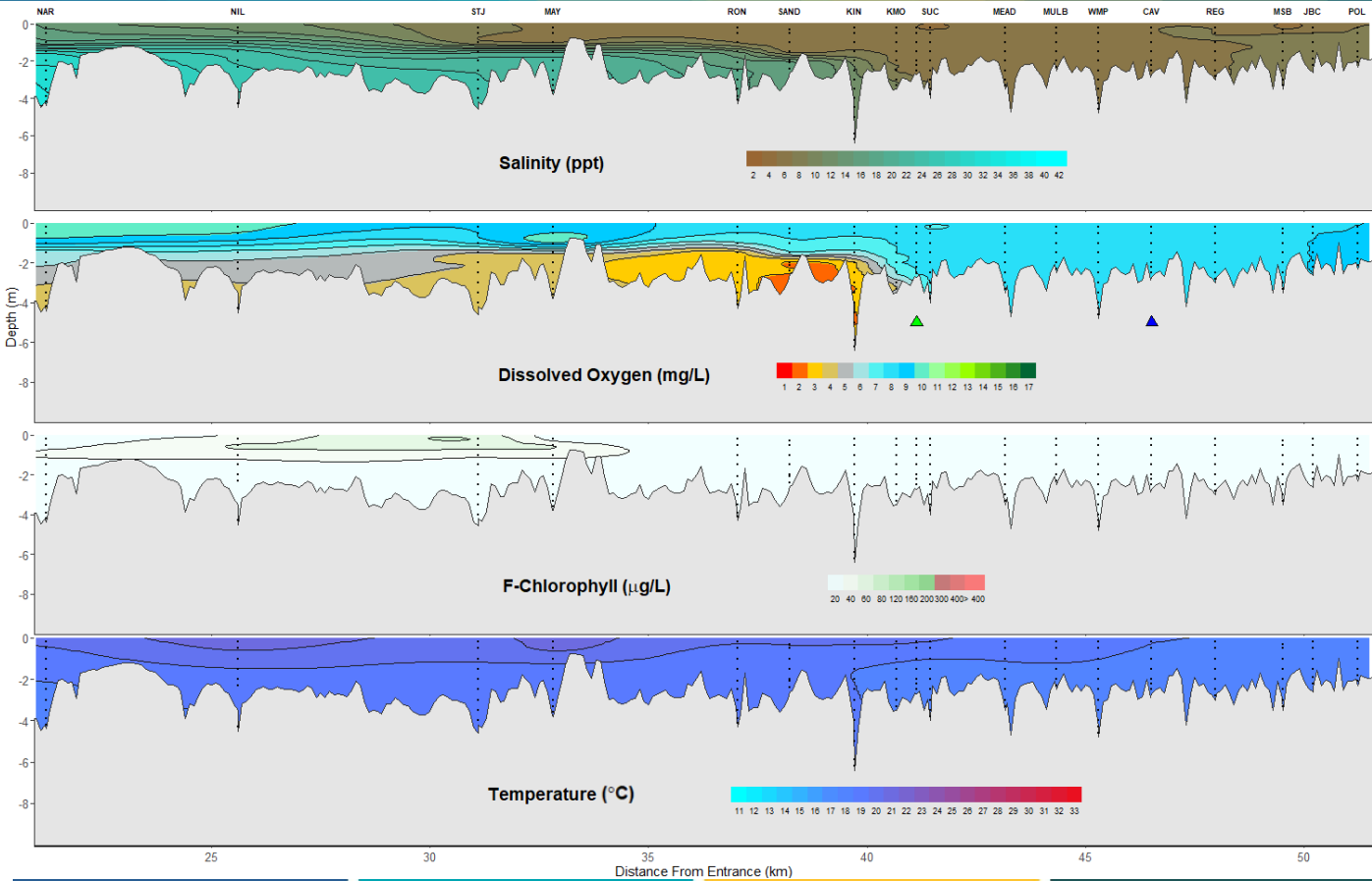
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Swan Canning Estuary - Water Quality Profiles – 11th September 2023



Swan Canning Estuary - Water Quality Profiles – 11th September 2023



Date: 11th September 2023

Weather & tide conditions: Conditions were cloudy with a predominantly westerly breeze of up to 7.1 knots. The predicted tides at Barrack St were 1.03 m at 8:35 am (high tide) and 0.64 m at 4:29 pm (low tide). Perth recorded 6.2 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (FP1 to NAR): The Lower Swan Canning Estuary was saline from FP1 to ARM and brackish over saline between HEA and NAR. Waters were oxygenated or well oxygenated, except bottom waters at NAR which were low in oxygen. Chlorophyll fluorescence was low and water temperatures ranged from 16.8 °C to 19.3 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen between STJ and RON. Chlorophyll fluorescence was low, except surface waters at STJ which were moderate. Water temperatures ranged from 18.1 °C to 20.4 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish, except surface waters between KIN and SUC and from MSB to JBC which were fresh. Surface waters were well oxygenated and bottom waters were low in oxygen or hypoxic between SAND and KIN. Chlorophyll fluorescence was low and water temperatures ranged from 17.2 °C to 19.2 °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 (mod/high flow): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹