



Department of Biodiversity,
Conservation and Attractions



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Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

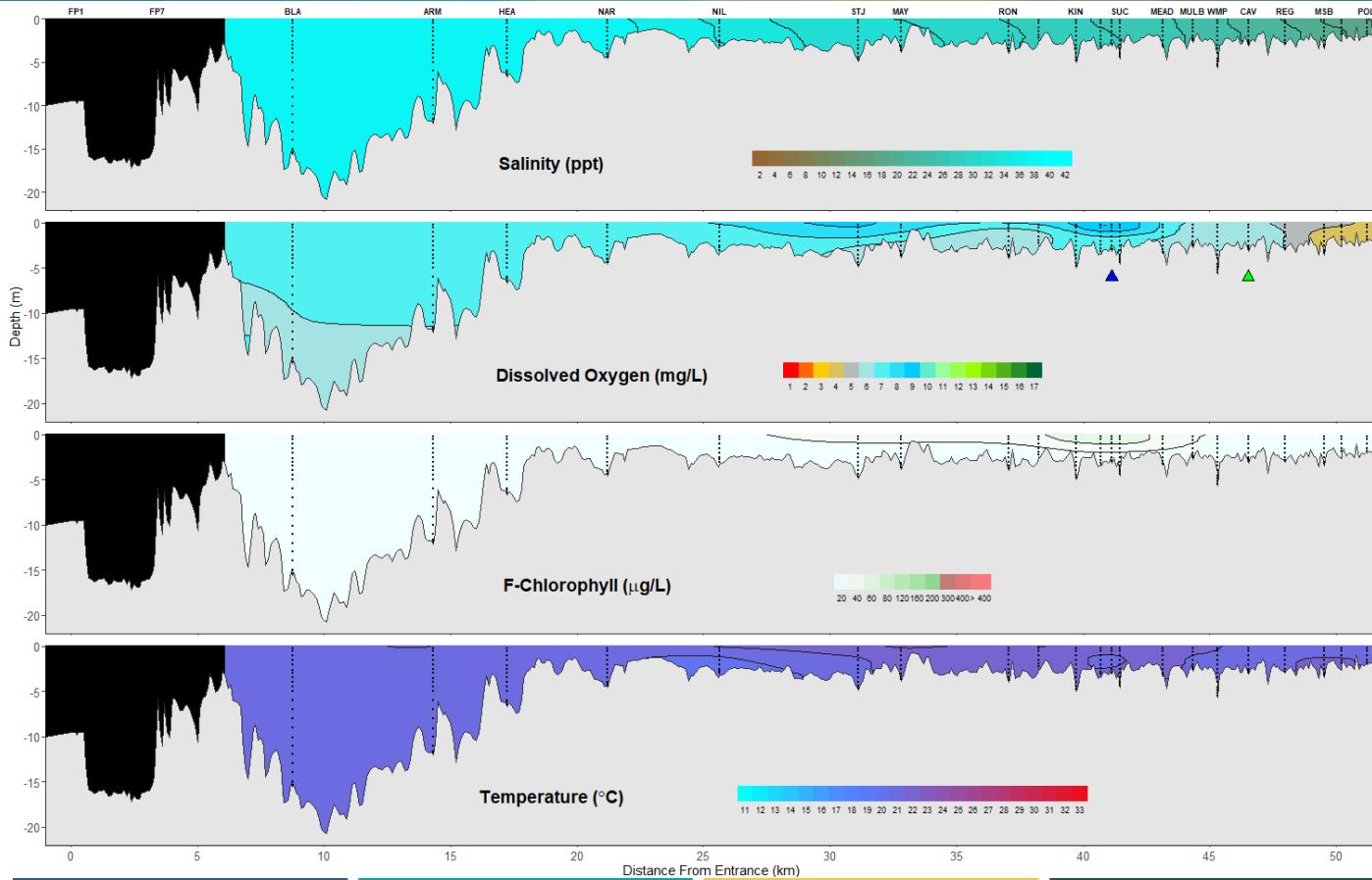
Lower Swan Canning Estuary to Upper Swan Estuary

19 April 2022

Prepared by

Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles – 19 April 2022





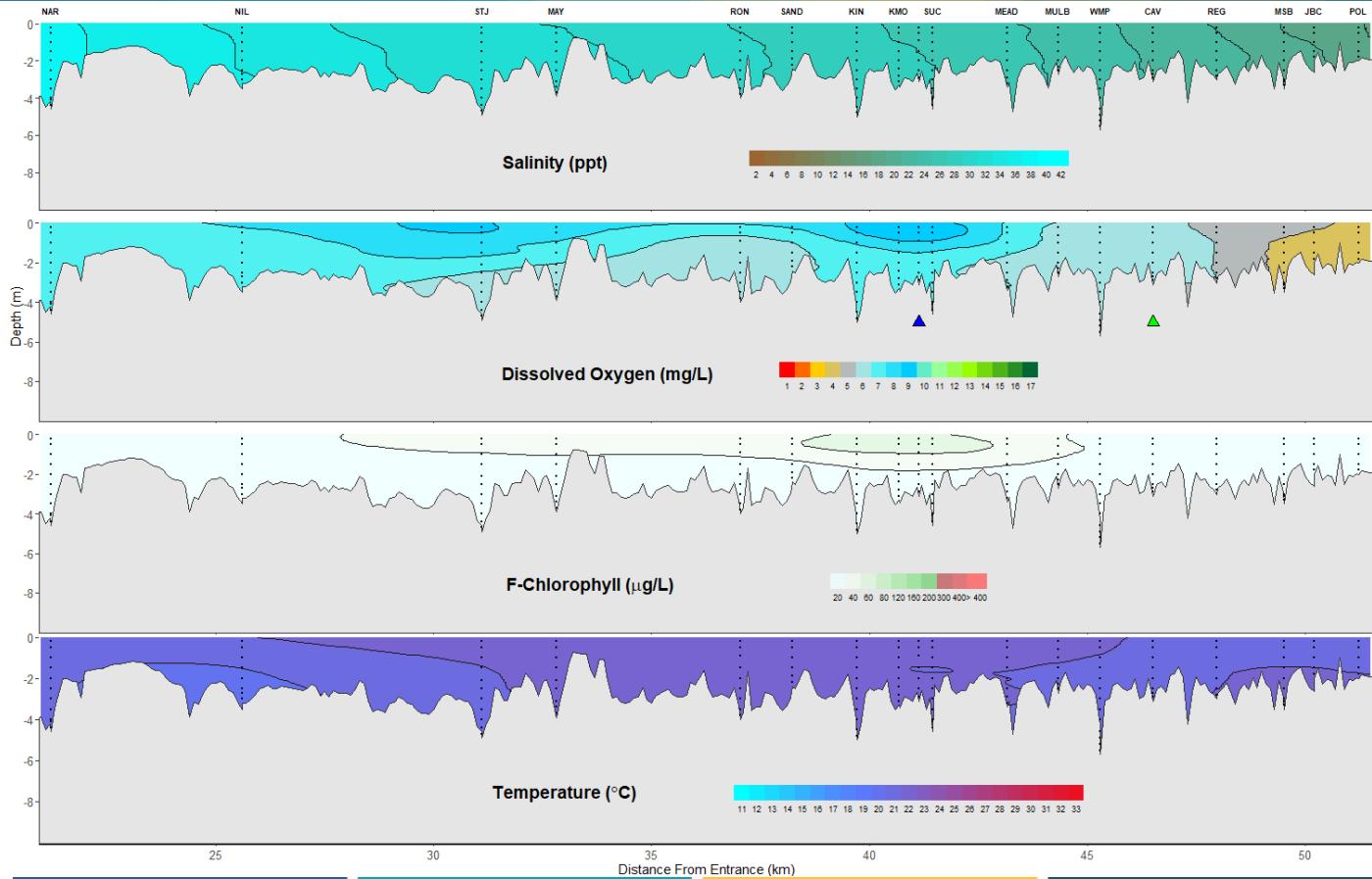
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Middle and Upper Swan Estuary- Water Quality Profiles – 19 April 2022





Date: 19 April 2022

NB: Sampling delayed due to public holiday (18 April 2022).

Weather & tide conditions: Conditions were clear with a variable breeze of up to 6 knots. The predicted tides at Barrack St were 0.80 m at 3:23 am (low tide), 1.22 m at 12:50 pm (high tide) and 0.68 m at 11:27 pm (2nd low tide). Perth recorded no rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was operational but not triggered to provide oxygen and the Caversham oxygenation plant was triggered to provide oxygen during the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was hypersaline, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 20.1 to 21.0 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 19.6 to 21.8 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was saline from SAND to SUC and brackish from MEAD to POL. Surface waters were oxygenated or well oxygenated from SAND to JBC and low in oxygen at POL. Bottom waters were low in oxygen from MSB to POL. Chlorophyll fluorescence was moderate in surface waters at KMO and SUC indicating higher microalgal activity in those areas. Water temperature ranged from 19.9 to 21.9 °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 (summer): 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, 2022. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 19 April 2022. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)