



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

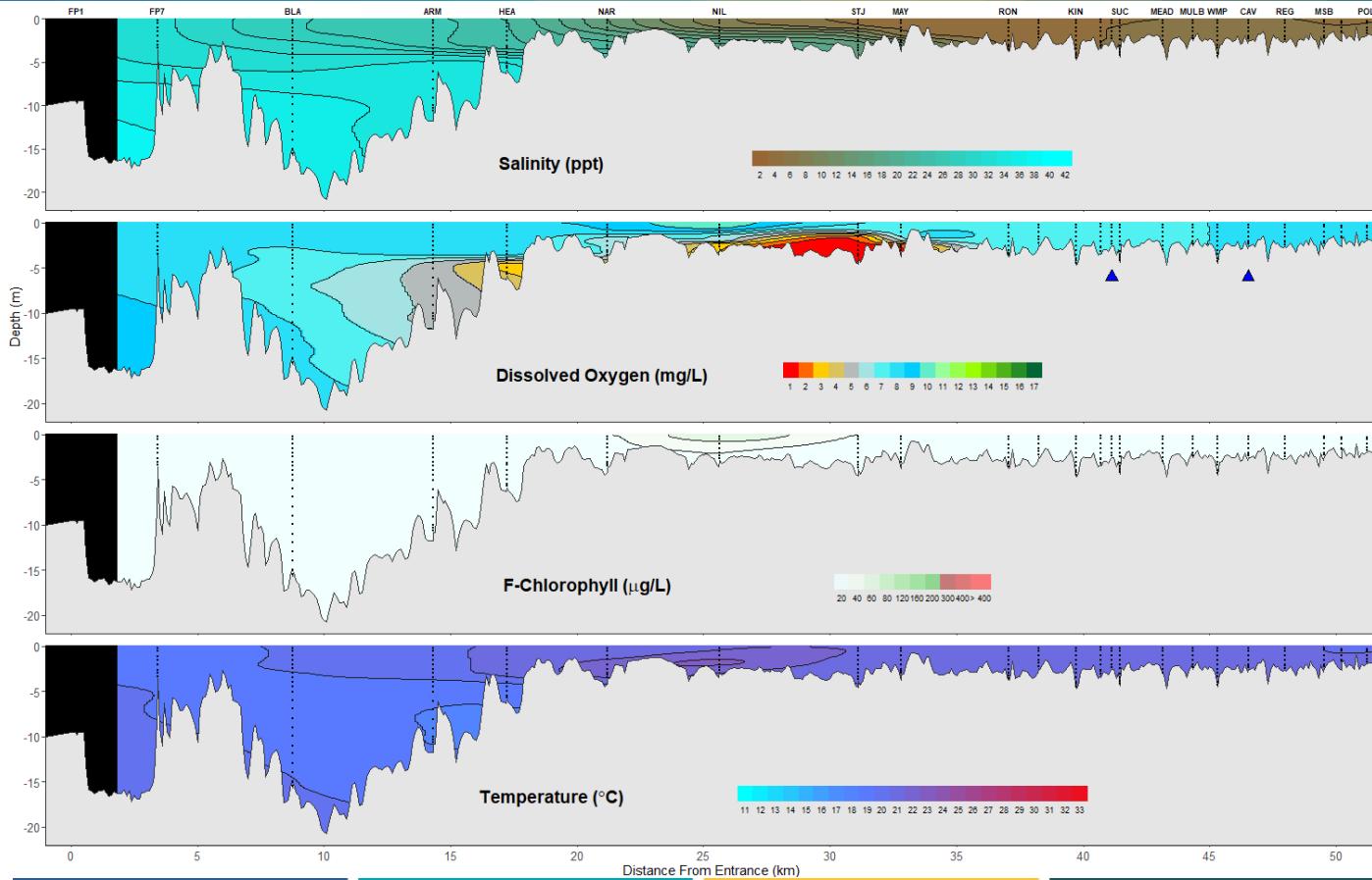
25 October 2021

Prepared by

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



Swan Canning Estuary- Water Quality Profiles – 25 October 2021





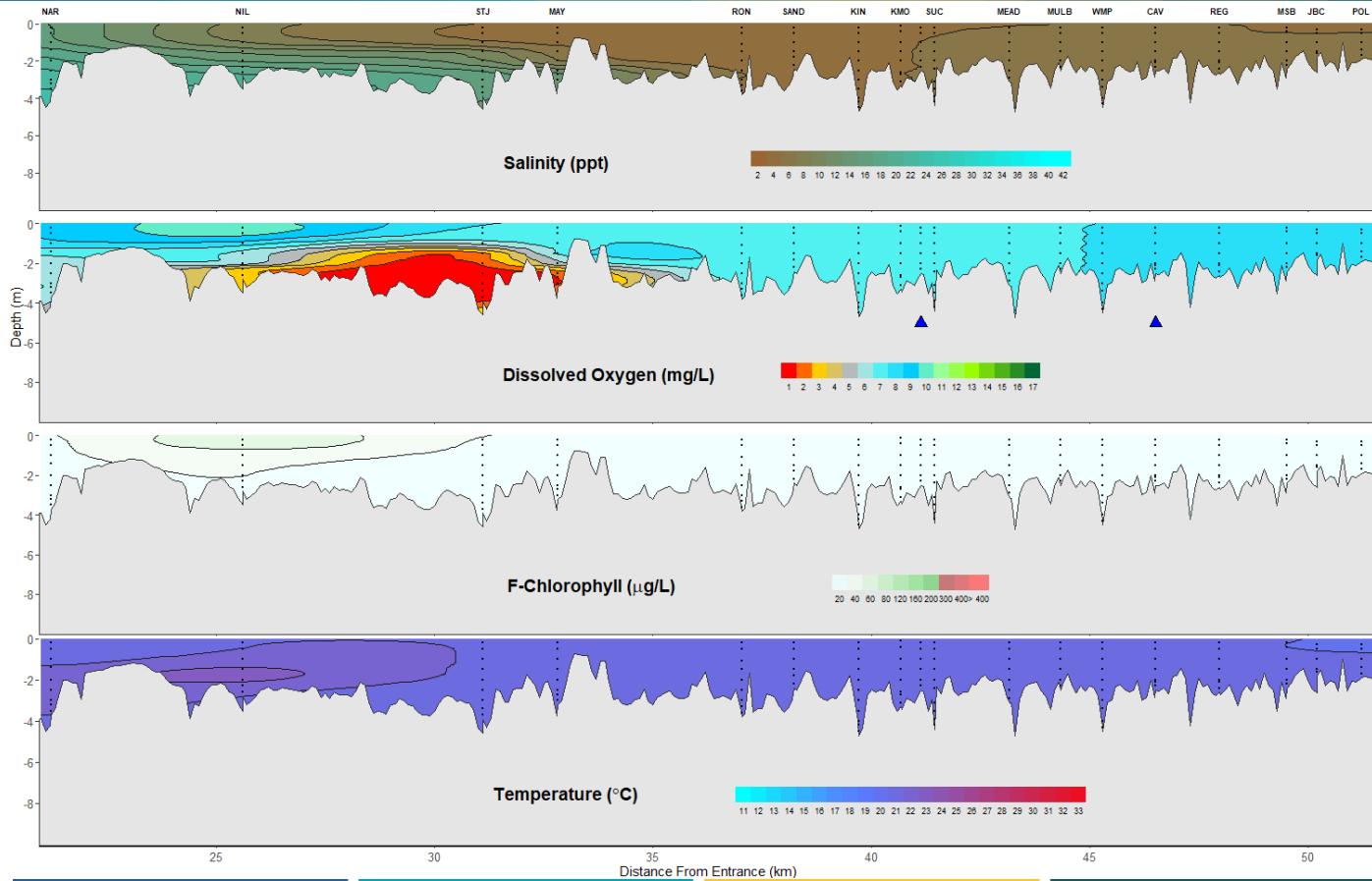
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Middle and Upper Swan Estuary- Water Quality Profiles – 25 October 2021





Date: 25 October 2021

Weather & tide conditions: Conditions were overcast with a strong southerly breeze up to 24 knots. The predicted tides at Barrack St were 1.05 m at 12:25 am (high tide) and 0.59 m at 10:36 am (low tide). Perth recorded 41.8 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (FP7 to NAR): The Lower Swan Canning Estuary was saline from FP7 to BLA and brackish over saline from ARM to NAR. Waters were oxygenated or well oxygenated throughout except for bottom waters at HEA which were low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 17.9 to 21.6 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish at NIL, fresh over brackish from STJ to MAY and fresh at RON. Surface waters were well oxygenated throughout and bottom waters were hypoxic except at RON. Chlorophyll fluorescence peaked at NIL but remained low throughout this zone. Water temperature ranged from 20.1 to 22.4 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was fresh throughout. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 19 to 20.8 °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, oxygenated >4-6 mg/L, low oxygen >2-4 mg/L, hypoxic 0.5-2 mg/L, anoxic <0.5 mg/L

Recommended reference: Department of Biodiversity, Conservation and Attractions 2021. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 25 October 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)