



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Western Australia.

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

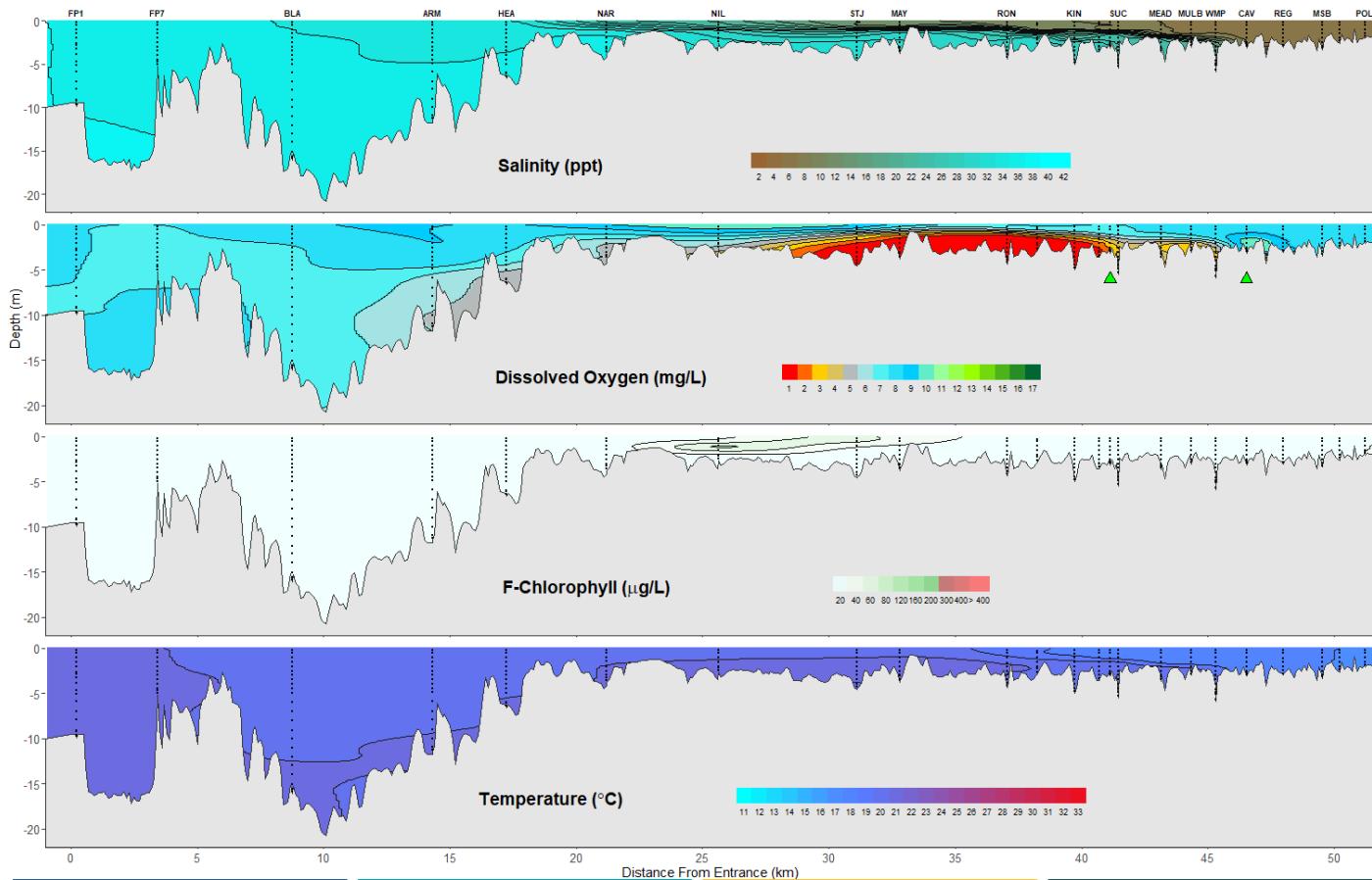
11th May 2021

Prepared by

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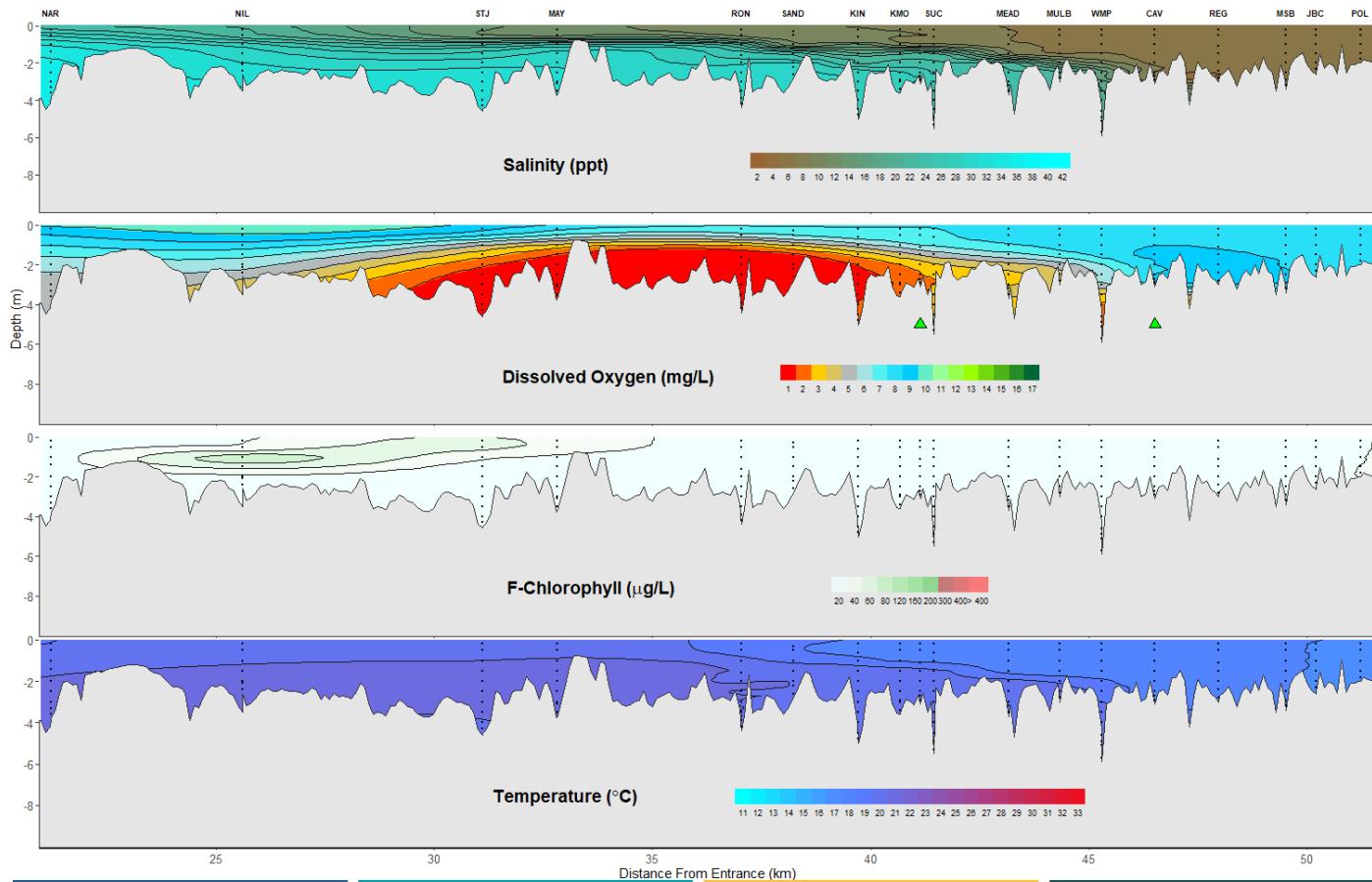


Swan Canning Estuary- Water Quality Profiles- 11th May 2021





Middle and Upper Swan Estuary- Water Quality Profiles- 11th May 2021





Date: 11th May 2021

NB: Sampling delayed due to vessel availability on 10 May 2021.

Weather & tide conditions: Conditions were overcast with an easterly breeze of up to 9 knots. The predicted tides at Barrack St were 0.88 m at 2:58 am (low tide), 1.21 m at 10:55 am (high tide) and 0.82 m at 8:00 pm (second low tide). Perth recorded 51.6 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline except at NAR which was brackish over saline. Waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 19.0 to 20.2 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline, surface waters were oxygenated or well oxygenated and bottom waters were anoxic from STJ to RON. Chlorophyll fluorescence highest at NIL indicating higher microalgal activity in that area. Water temperature ranged from 18.5 to 20.4 °C.

Upper Swan Estuary (SANDBR to POL): The Upper Swan Estuary was brackish over saline at SANDBR and brackish from KIN to POL. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen from SUC to MEAD and at MULB, hypoxic at WMP and anoxic between SANDBR and KMO. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.7 to 19.5 °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 >6mg/L, oxygenated >4-6mg/L, low oxygen >2-4mg/L, hypoxic 0.5-2mg/L, anoxic <0.5mg/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 11th May 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)