



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

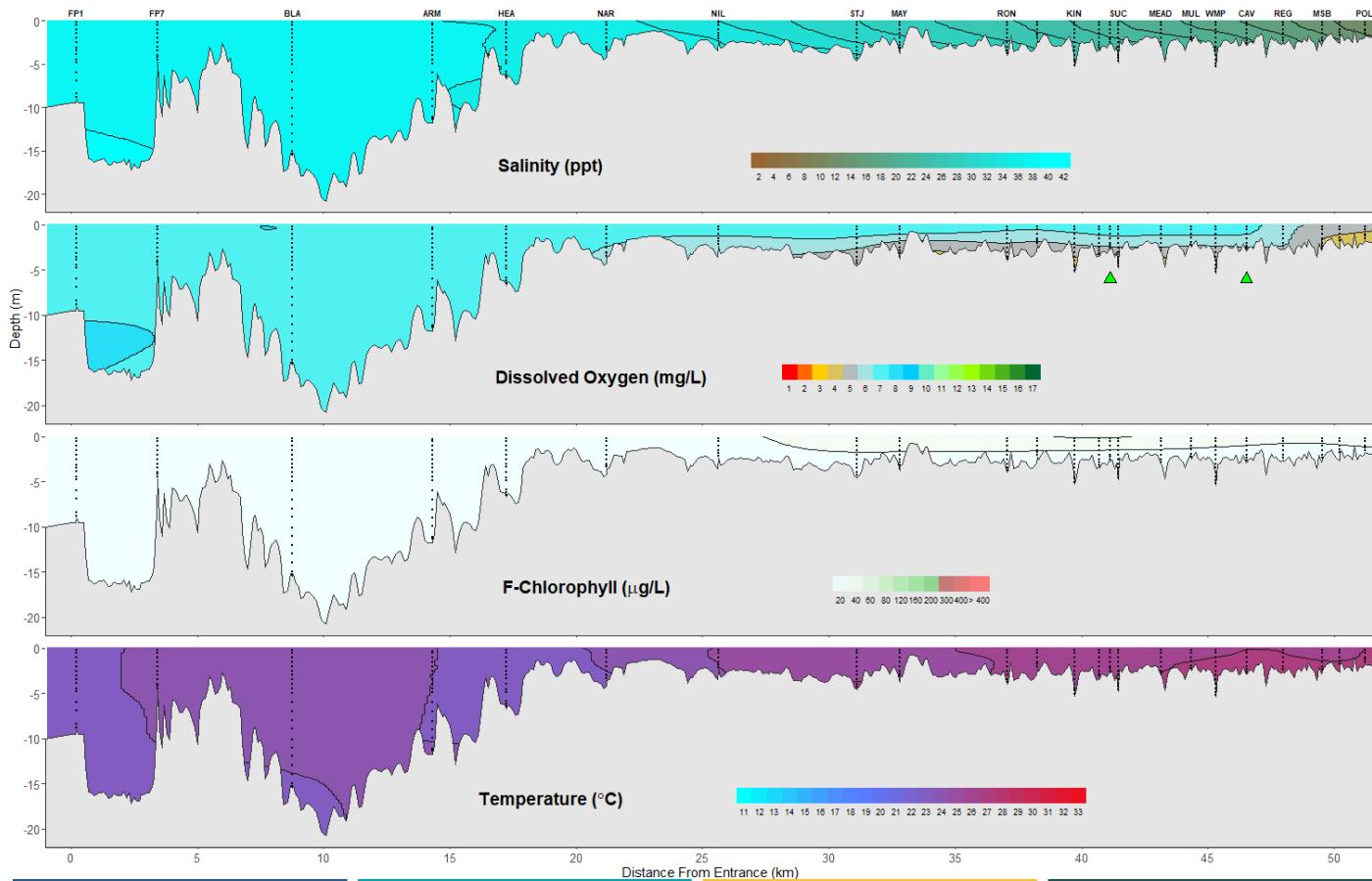
18th January 2021

Prepared by

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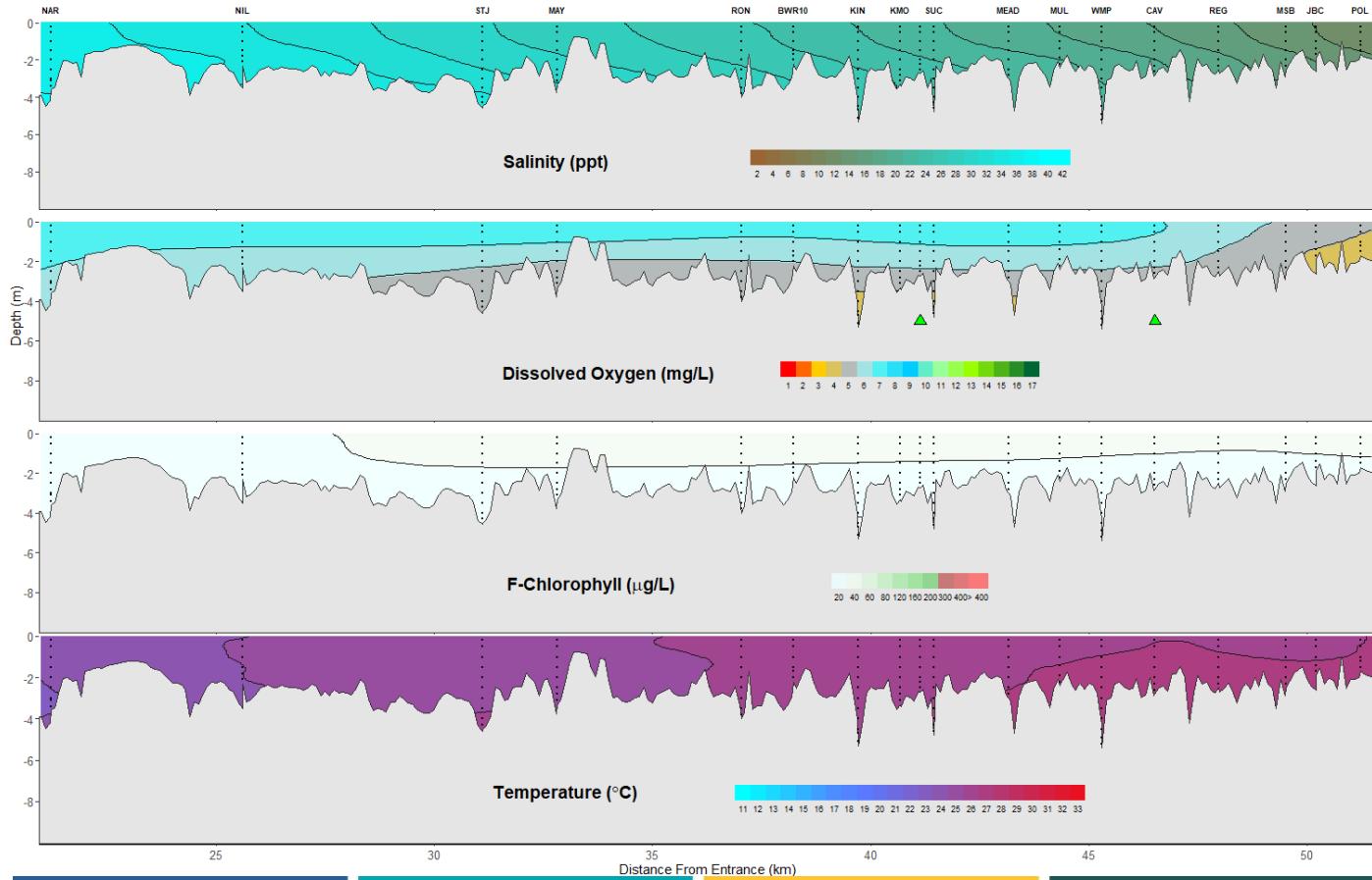


Swan Canning Estuary- Water Quality Profiles- 18th January 2021





Middle and Upper Swan Estuary- Water Quality Profiles- 18th January 2021





Date: 18th January 2021

Weather & tide conditions: Conditions were overcast with a predominantly easterly breeze of up to 12 knots. The predicted tides at Barrack St were 0.64 m at 9:43 am (low tide) and 0.93 m at 11:41 pm (high tide). Perth recorded 0.2 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 (FPI to NAR): The Lower Swan Canning Estuary was saline, waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 22.6 to 23.4 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline between NIL and MAY and brackish over saline at RON. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at MAY. Chlorophyll fluorescence was highest at STJ indicating higher microalgal activity in that area. Water temperature ranged from 24.0 to 25.2 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish over saline at BWR10 and brackish from KIN to POL. Surface waters were oxygenated or well oxygenated. Bottom waters were low in oxygen at KIN and SUC and from MSB to POL. Chlorophyll fluorescence was highest at KIN indicating higher microalgal activity in that area. Water temperature ranged from 25.1 to 26.7 °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 18th January 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)