



Department of Biodiversity,
Conservation and Attractions



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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

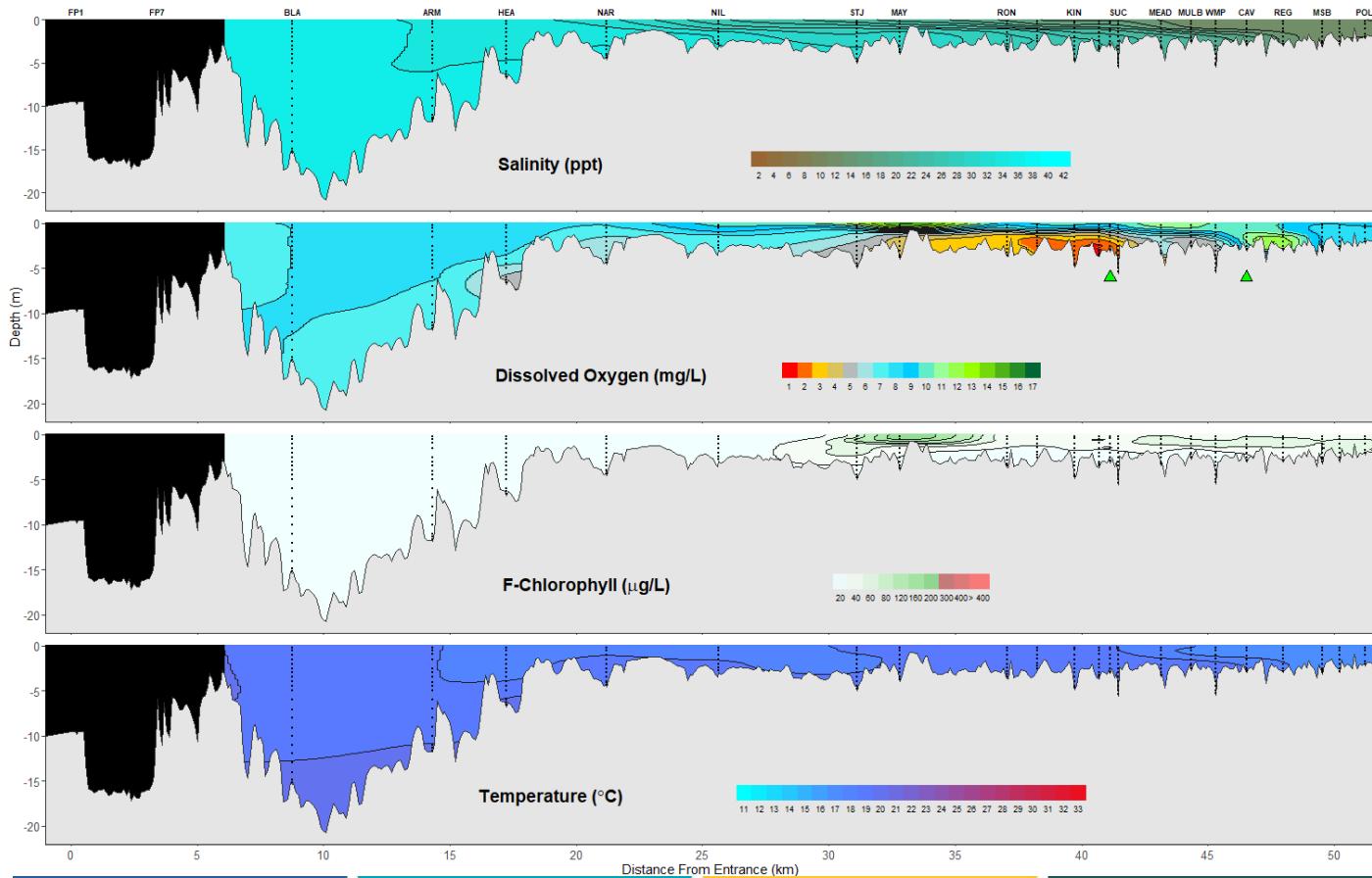
17th May 2021

Prepared by

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Department of Biodiversity, Conservation and Attractions

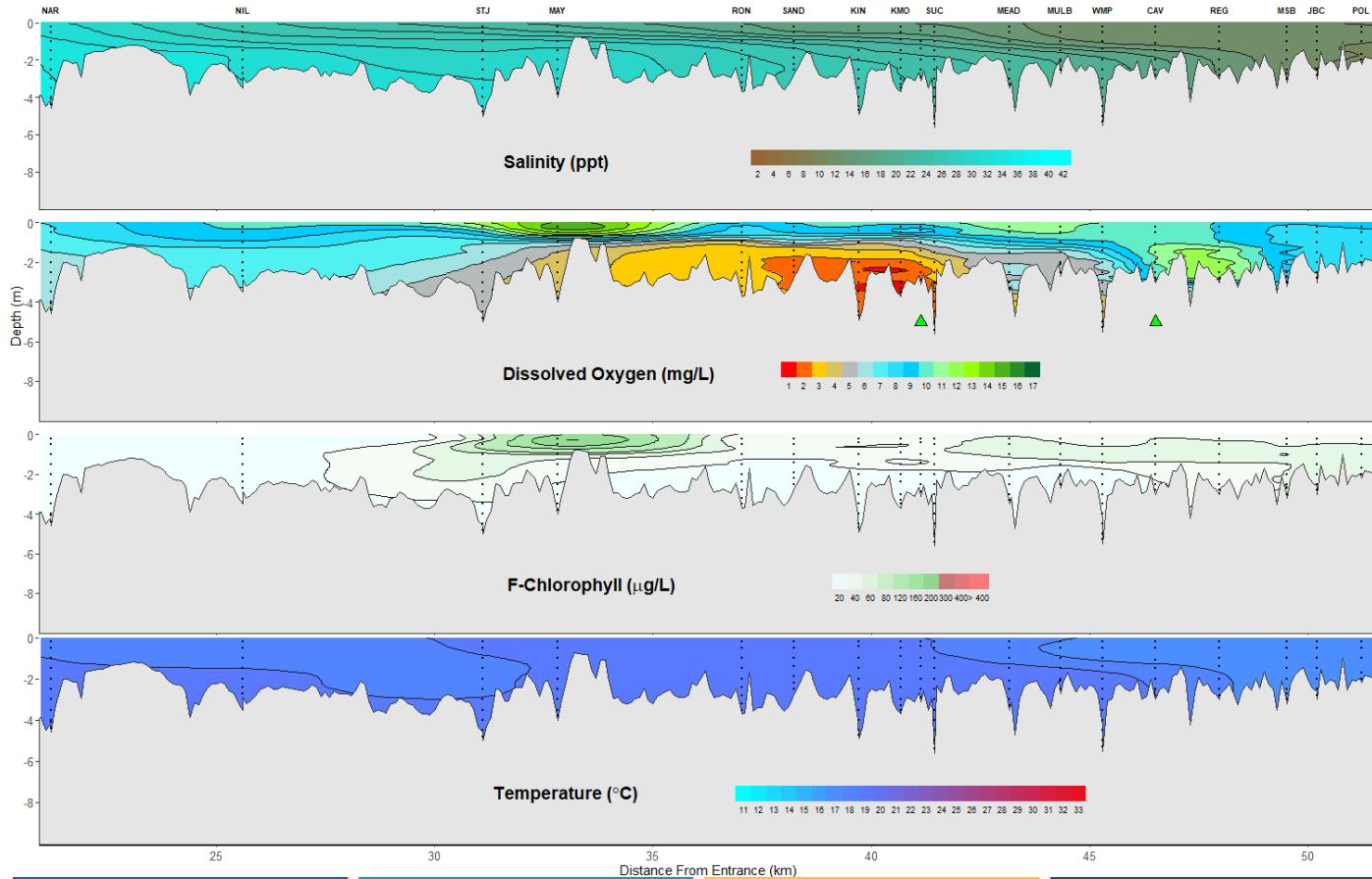


Swan Canning Estuary- Water Quality Profiles- 17th May 2021





Middle and Upper Swan Estuary- Water Quality Profiles- 17th May 2021





Date: 17th May 2021

Weather & tide conditions: Conditions were overcast with an easterly breeze of up to 9 knots. The predicted tides at Barrack St were 0.73 m at 12:24 am (low tide) and 1.24 m at 1:45 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 (BLA to NAR): The Lower Swan Canning Estuary was saline, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 17.8 to 19.2 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL and brackish over saline between STJ and RON. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen from MAY to RON. Chlorophyll fluorescence was highest at MAY indicating higher microalgal activity in that area. Water temperature ranged from 17.3 to 18.4 °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 at WMP and hypoxic from SANDBR to SUC. Chlorophyll fluorescence was highest at MEAD indicating higher microalgal activity in that area. Water temperature ranged from 16.2 to 18.9 °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 >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 17th May 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)