



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

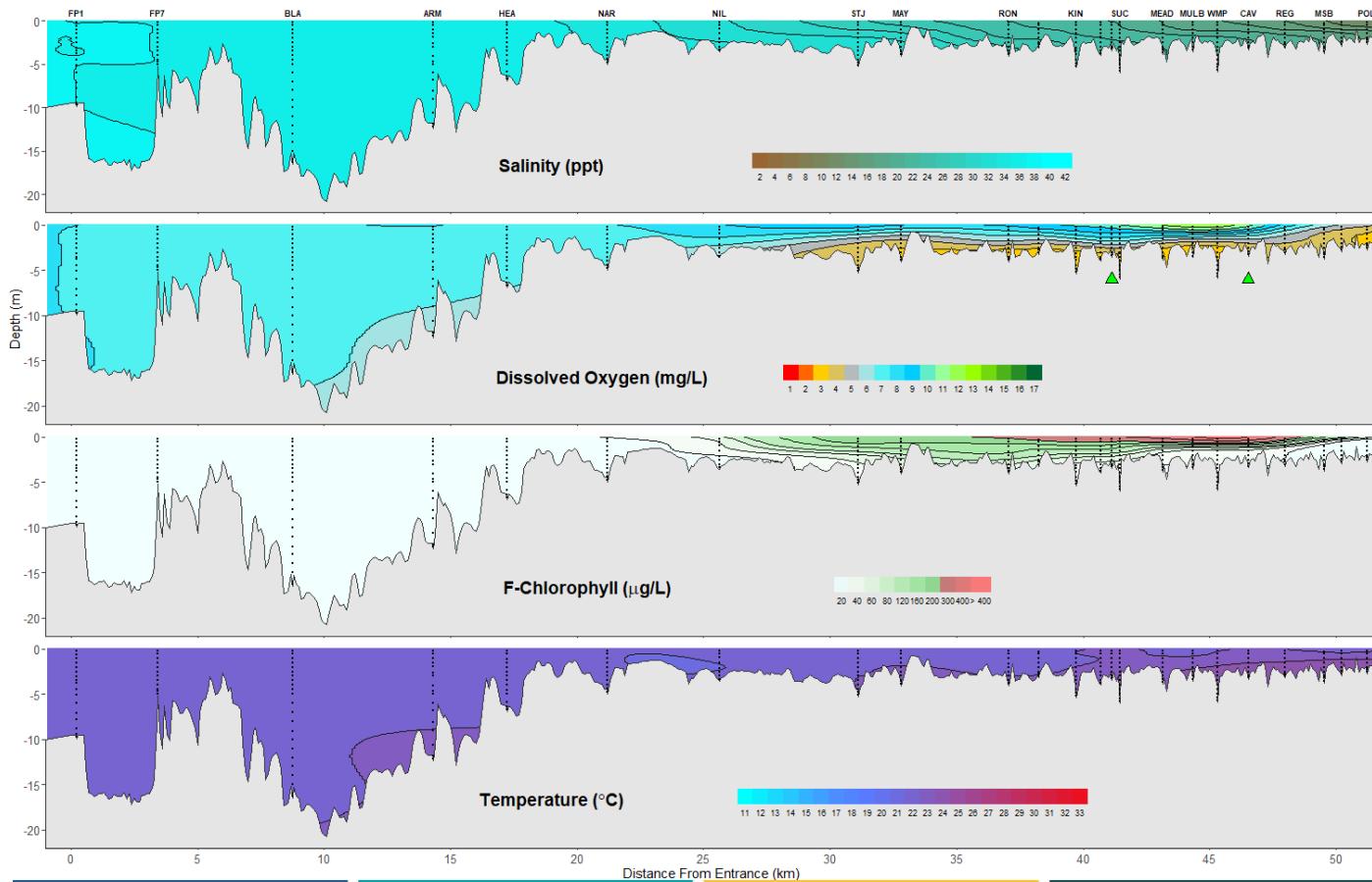
12th April 2021

Prepared by

Rivers and Estuaries Science
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Department of Biodiversity, Conservation and Attractions

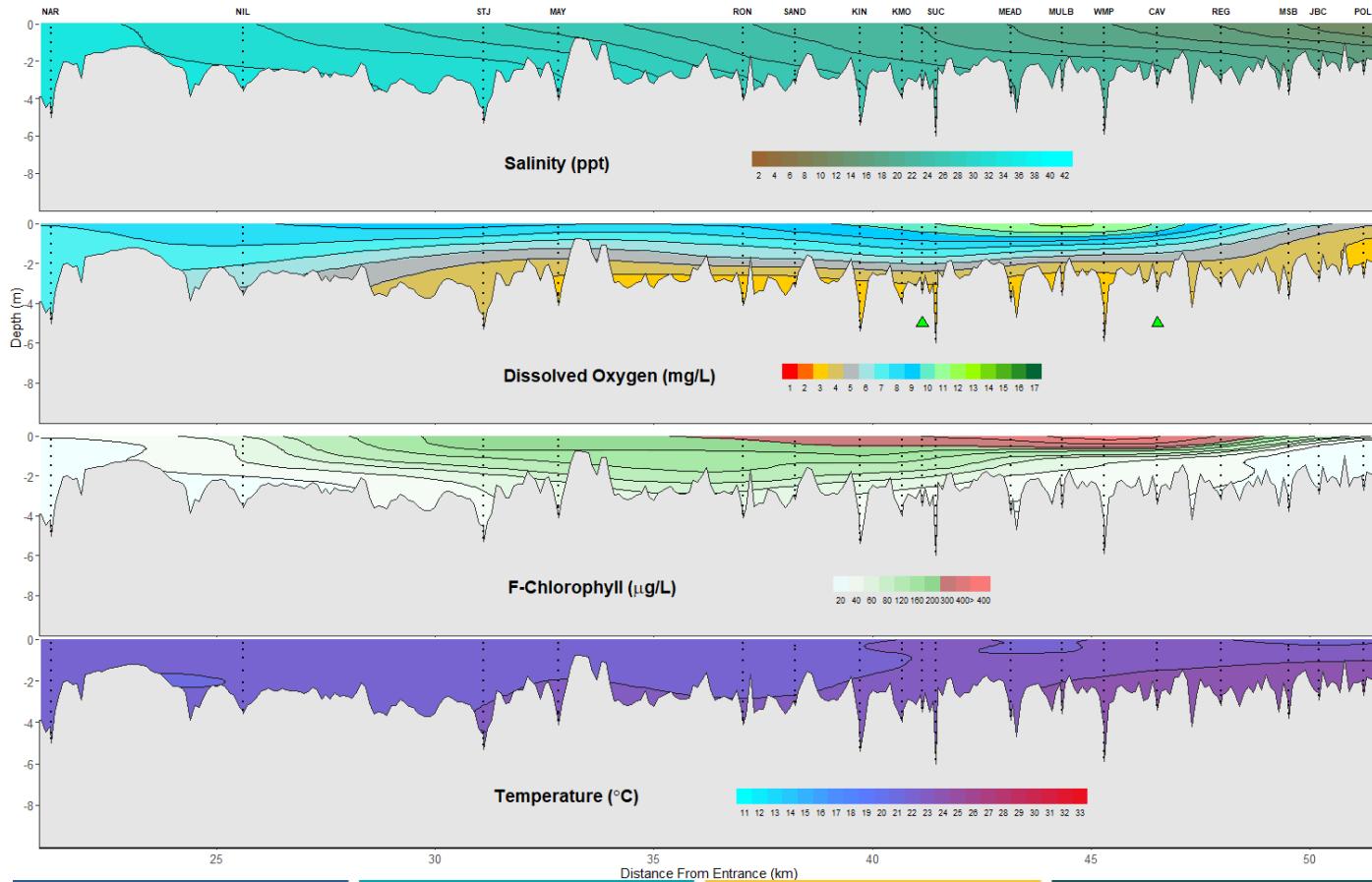


Swan Canning Estuary- Water Quality Profiles- 12th April 2021





Middle and Upper Swan Estuary- Water Quality Profiles- 12th April 2021





Date: 12th April 2021

Weather & tide conditions: Conditions were overcast with a variable southerly breeze of up to 17 knots. The predicted tides at Barrack St were 0.8 m at 4:59 am (low tide), 1.06 m at 11:57 am (high tide) and 0.83 m at 6:43 pm (second low tide). Perth recorded 19.4 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 oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 21.0 to 22.9 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline from NIL to MAY and brackish over saline at RON. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen between STJ and RON. Chlorophyll fluorescence was elevated between STJ and RON indicating higher microalgal activity in that area. Water temperature ranged from 20.1 to 22.2 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline at SAND and brackish from KIN to POL. Surface waters were oxygenated or well oxygenated except at POL which was low in oxygen. Bottom waters were low in oxygen except at WMP which was hypoxic. Chlorophyll fluorescence was elevated between SAND and WMP indicating higher microalgal activity in that area. Water temperature ranged from 22.0 to 23.7 °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 12th April 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)