



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

16th November 2020

Prepared by

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Department of Biodiversity, Conservation and Attractions



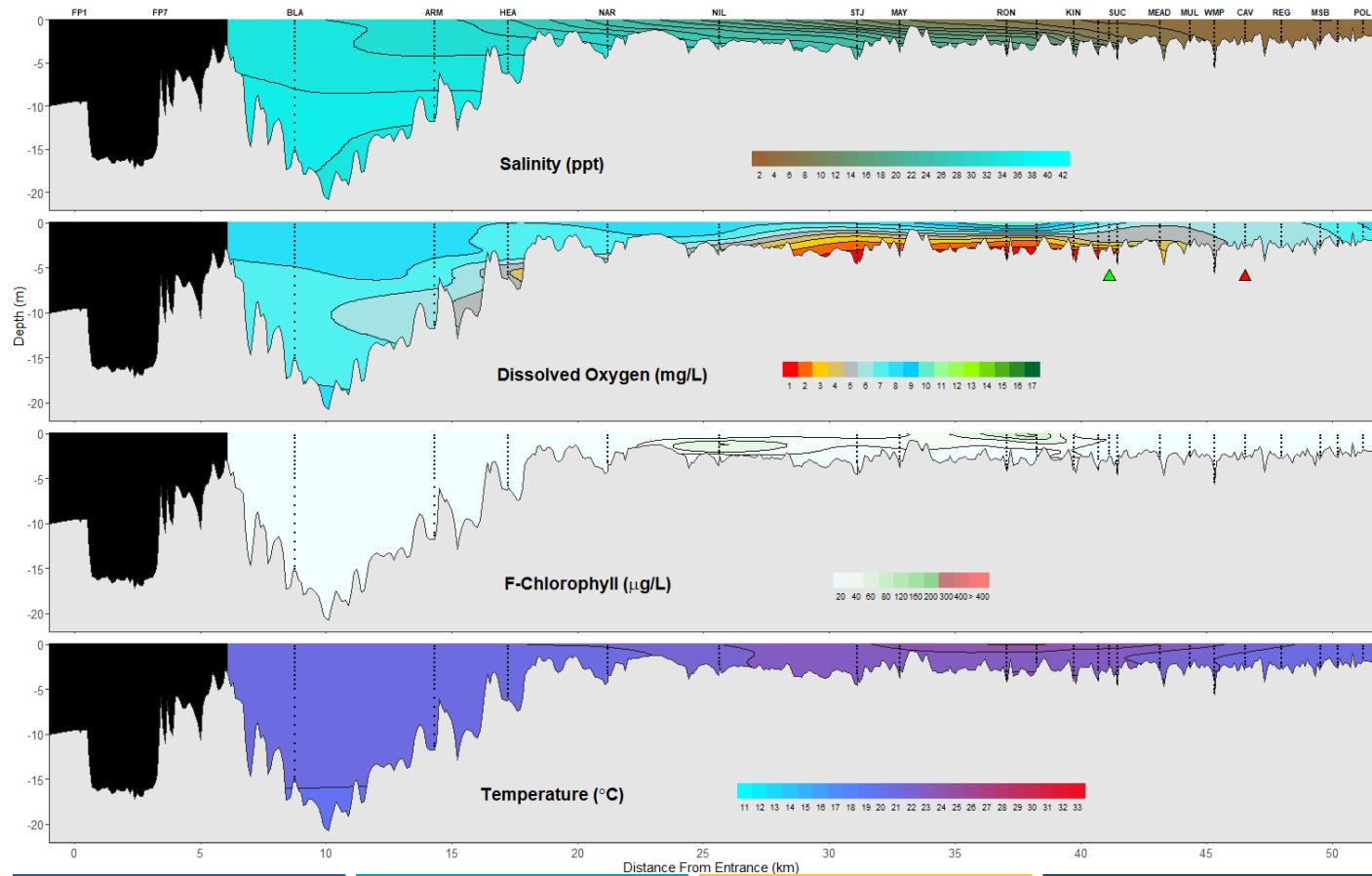
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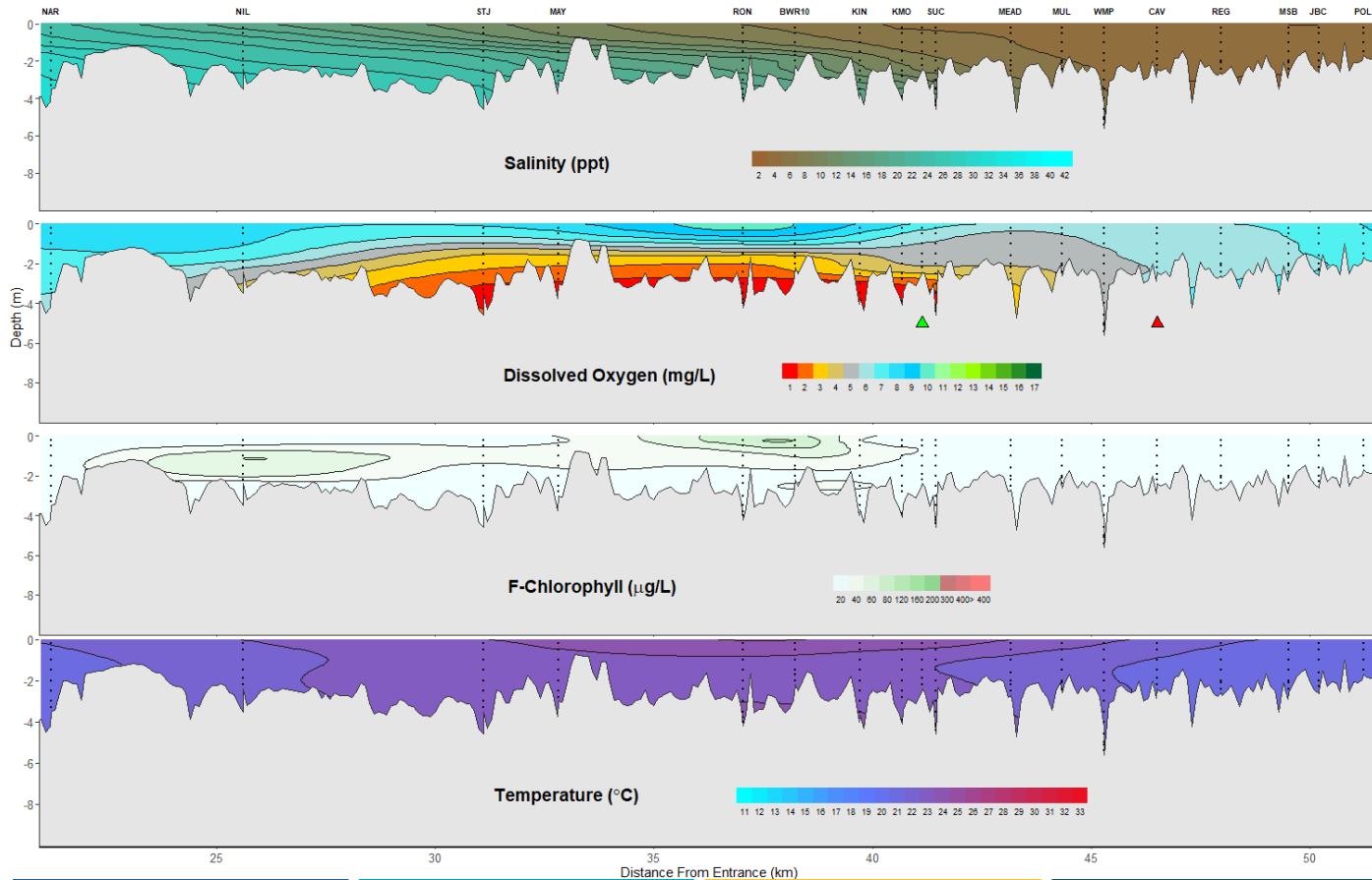
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Swan Canning Estuary- Water Quality Profiles- 16th November 2020





Middle and Upper Swan Estuary- Water Quality Profiles- 16th November 2020





Date: 16th November 2020

Weather & tide conditions: Conditions were clear with a predominantly easterly breeze of up to 6 knots. The predicted tides at Barrack St were 0.46 m at 9:09 am (low tide) and 1.08 m at 11:29 pm (high tide). Perth recorded 45.4 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline between BLA and HEA and brackish over saline at NAR. Waters were oxygenated or well oxygenated except bottom waters at HEA which were low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 20.0 to 20.1 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated and bottom waters were hypoxic from STJ to MAY and anoxic at RON. Chlorophyll fluorescence was elevated between NIL and RON indicating higher microalgal activity in that area. Water temperature ranged from 21.8 to 24.2 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish between BWR10 and KIN, fresh over brackish from KMO to SUC and fresh between MEAD and POL. Surface waters were oxygenated or well oxygenated and bottom waters were hypoxic at KMO and anoxic from BWR10 to KIN and at SUC. Chlorophyll fluorescence was highest at BWR10 indicating higher microalgal activity in that area. Water temperature ranged from 19.7 to 24.2 °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 2020. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 16th November 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)