



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

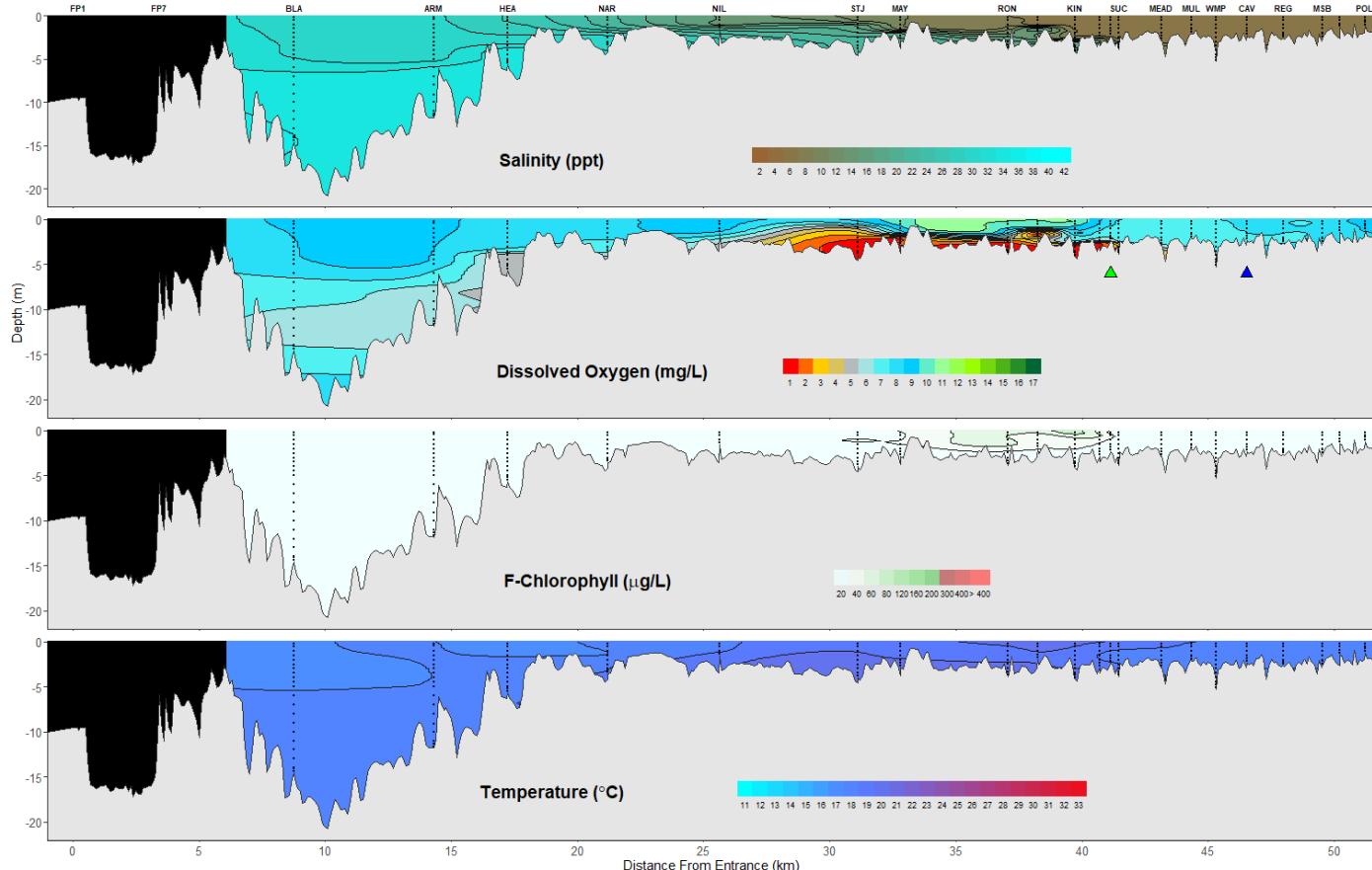
Lower Swan Canning Estuary to Upper Swan Estuary

5th October 2020

Prepared by

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Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles- 5th October 2020





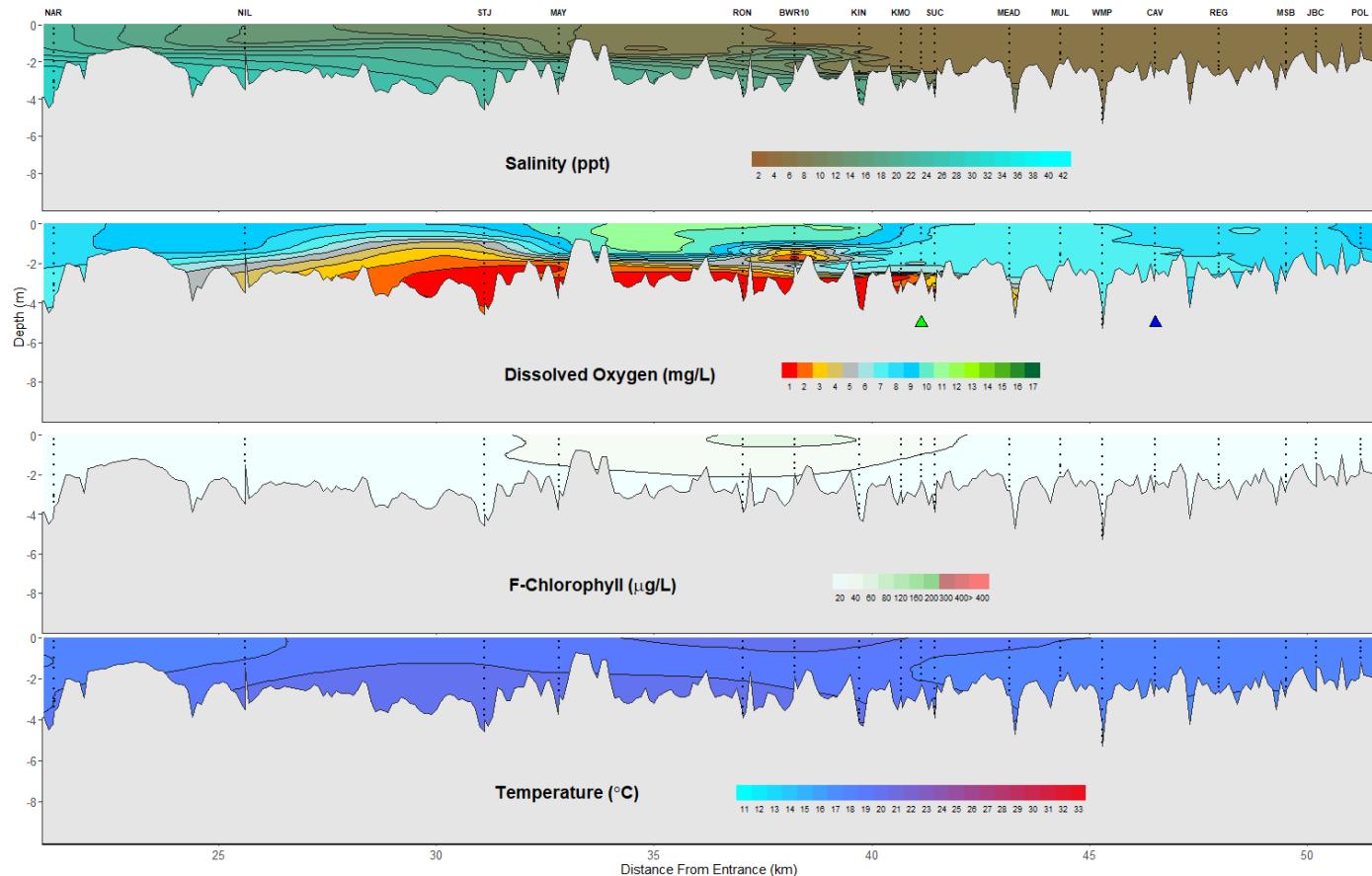
Department of Biodiversity,
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Biodiversity and
Conservation Science

We're working for
Western Australia.

Middle and Upper Swan Estuary- Water Quality Profiles- 5th October 2020





Date: 5th October 2020

Weather & tide conditions: Conditions were clear with a variable breeze of up to 10 knots. The predicted tides at Barrack St were 0.93 m at 12:12 am (high tide), 0.63 m at 8:00 am (low tide) and 0.7 m at 1:30 pm (second high tide). Perth recorded 6.0 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was triggered to provide oxygen, while the Caversham oxygenation plant was operational but was not 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 from BLA to HEA and brackish over saline at NAR. Waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.7 to 18.0 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from NIL to RON. Surface waters were well oxygenated and bottom waters were hypoxic at MAY and anoxic at STJ and RON. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in this area. Water temperature ranged from 17.8 to 19.8 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish from BWR10 to KIN, fresh over brackish between KMO and SUC and fresh from MEAD to POL. Surface waters were well oxygenated. Bottom waters were hypoxic at BWR10 and KMO and anoxic at KIN and SUC. Chlorophyll fluorescence was highest at KIN indicating higher microalgal activity in this area. Water temperature ranged from 16.9 to 19.8 °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 5th October 2020*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)