



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

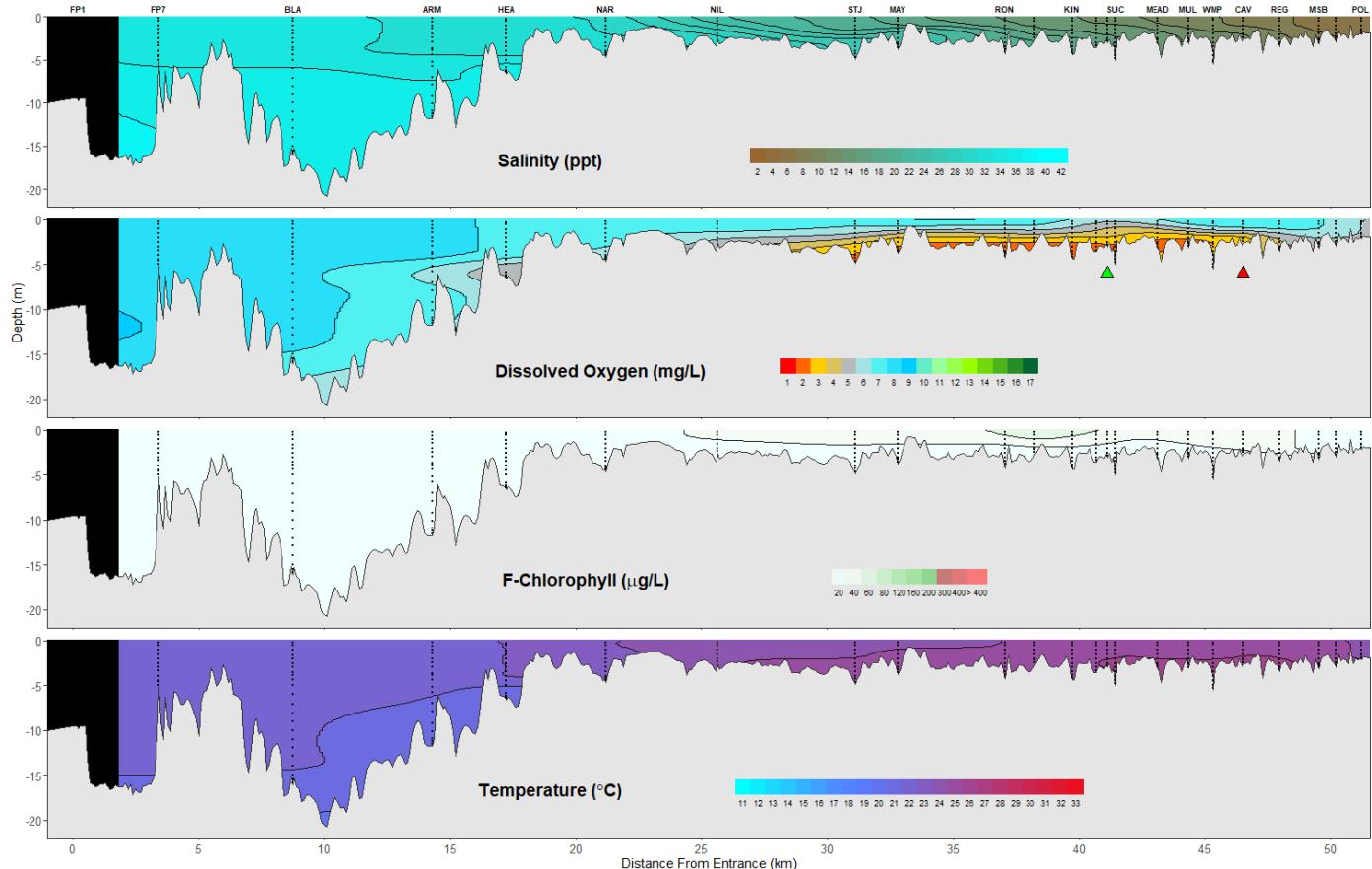
Lower Swan Canning Estuary to Upper Swan Estuary

9th November 2020

Prepared by

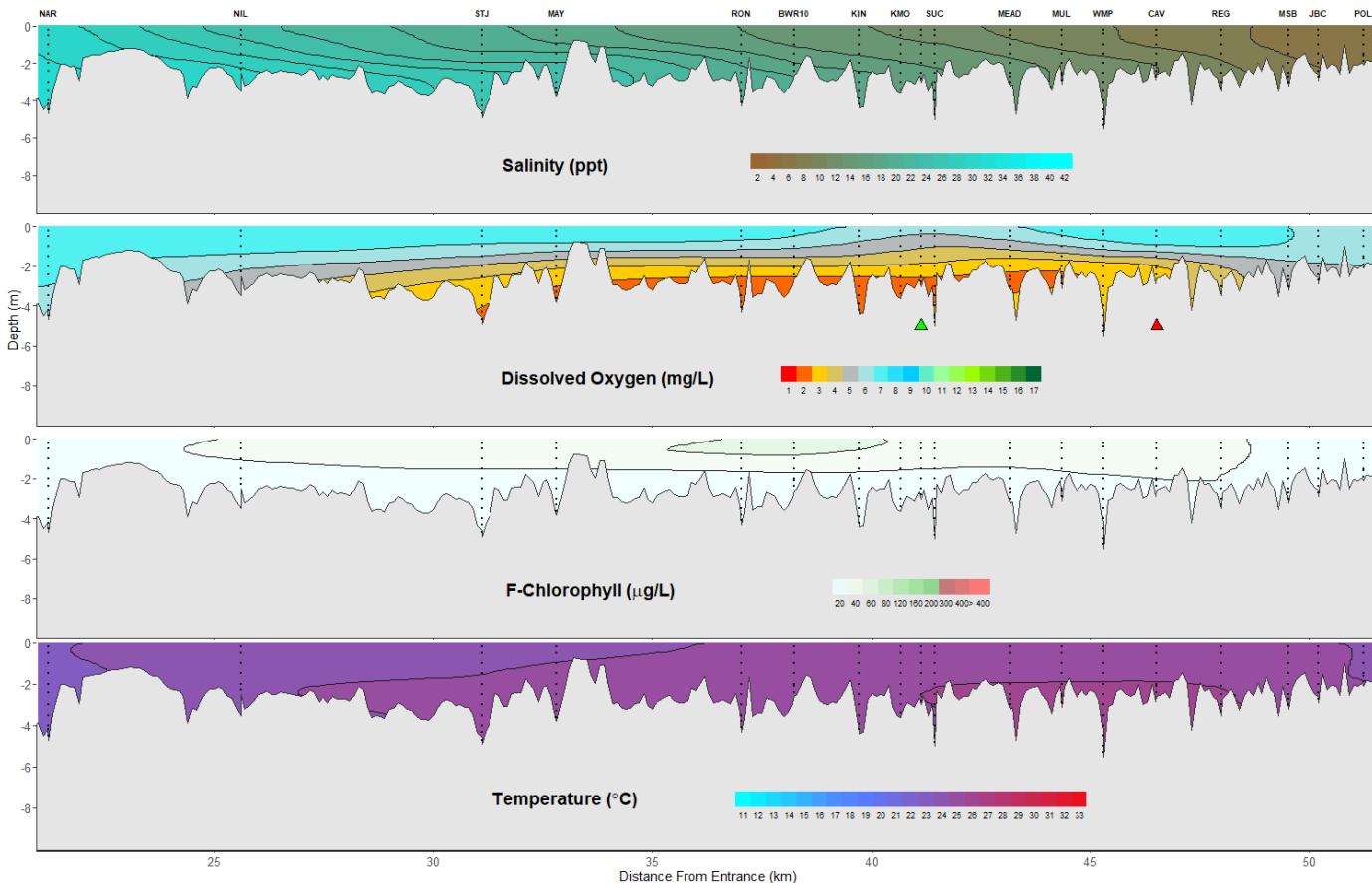
Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles- 9th November 2020





Middle and Upper Swan Estuary- Water Quality Profiles- 9th November 2020





Date: 9th November 2020

Weather & tide conditions: Conditions were stormy with a predominantly north westerly breeze of up to 20 knots. The predicted tides at Barrack St were 0.91 m at 3:15 am (high tide) and 0.55 m at 2:49 pm (low 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 and the Caversham oxygenation plant was not operational 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 20.5 to 22.9 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline between NIL and STJ and brackish from MAY to RON. Surface waters were oxygenated or well oxygenated and bottom waters were hypoxic between STJ and RON. Chlorophyll fluorescence was highest at MAY indicating higher microalgal activity in that area. Water temperature ranged from 23.4 to 24.7 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish from BWR10 to JBC and fresh at POL. Surface waters were oxygenated or well oxygenated. Bottom waters were low in oxygen at VIT, SUC and CAV and hypoxic from BWR10 to KMO and between MEAD and MULB FARM. Chlorophyll fluorescence was highest at BWR10 indicating higher microalgal activity in that area. Water temperature ranged from 23.8 to 25.1 °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 9th November 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)