



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

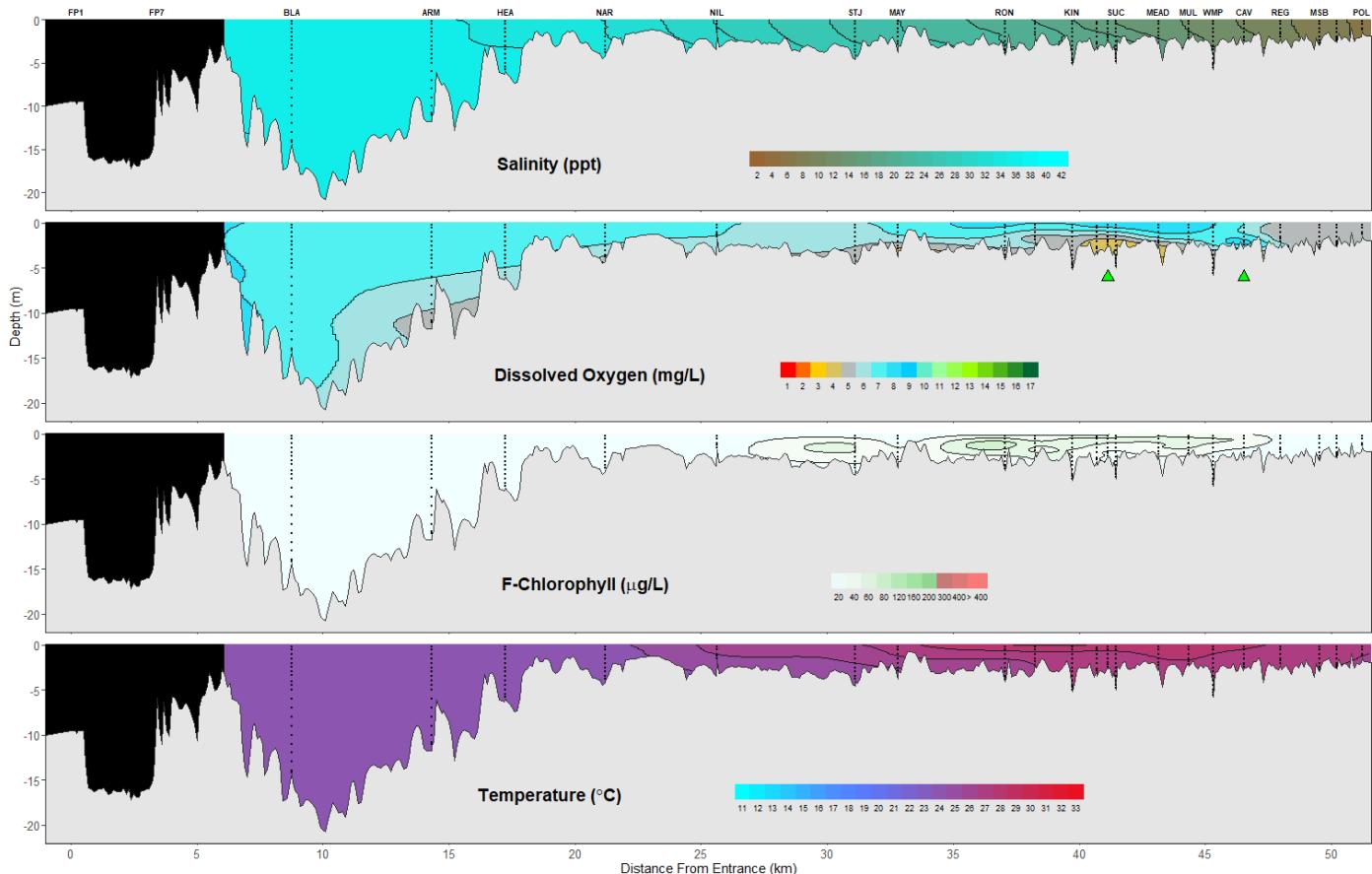
Lower Swan Canning Estuary to Upper Swan Estuary

29th December 2020

Prepared by

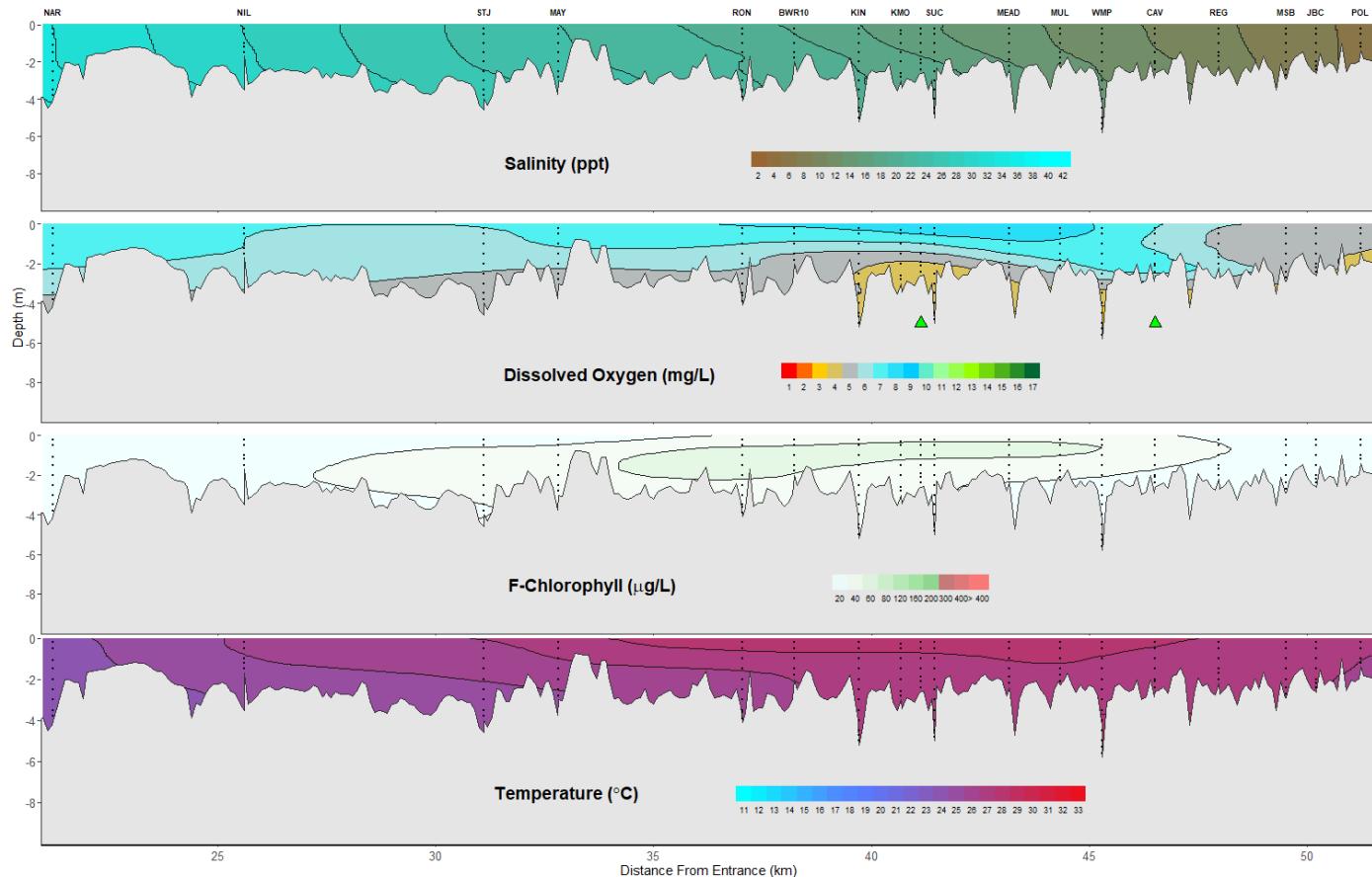
Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles- 29th December 2020





Middle and Upper Swan Estuary- Water Quality Profiles- 29th December 2020





Date: 29th December 2020

Weather & tide conditions: Conditions were clear with a predominantly easterly breeze of up to 20 knots. The predicted tides at Barrack St were 0.49 m at 8:28 am (low tide) and 1.11 m at 10:24 pm (high tide). Perth recorded no rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant and Caversham oxygenation plant 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 23.1 to 23.7 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL and brackish from STJ to RON. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at MAY. Chlorophyll fluorescence was elevated between STJ and RON indicating higher microalgal activity in that area. Water temperature ranged from 24.7 to 28.0 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated, except at REG where surface waters were low in oxygen. Bottom waters were low in oxygen between BWR10 and SUC, at WMP and between REG and MSB. Chlorophyll fluorescence was elevated between BWR10 and WMP indicating higher microalgal activity in this area. Water temperature ranged from 25.9 to 28.4 °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 29th December 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)