



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

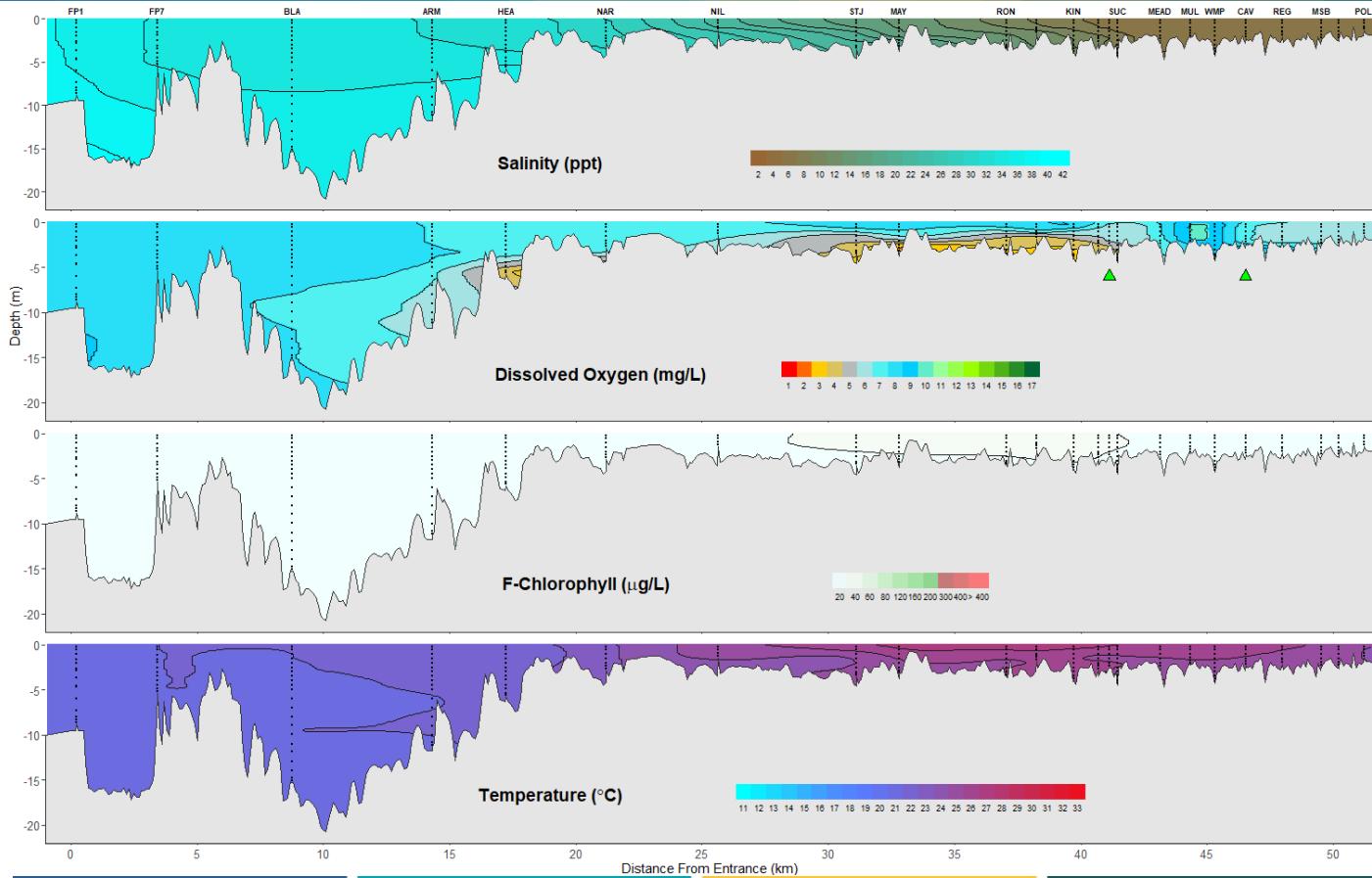
Lower Swan Canning Estuary to Upper Swan Estuary

7th December 2020

Prepared by

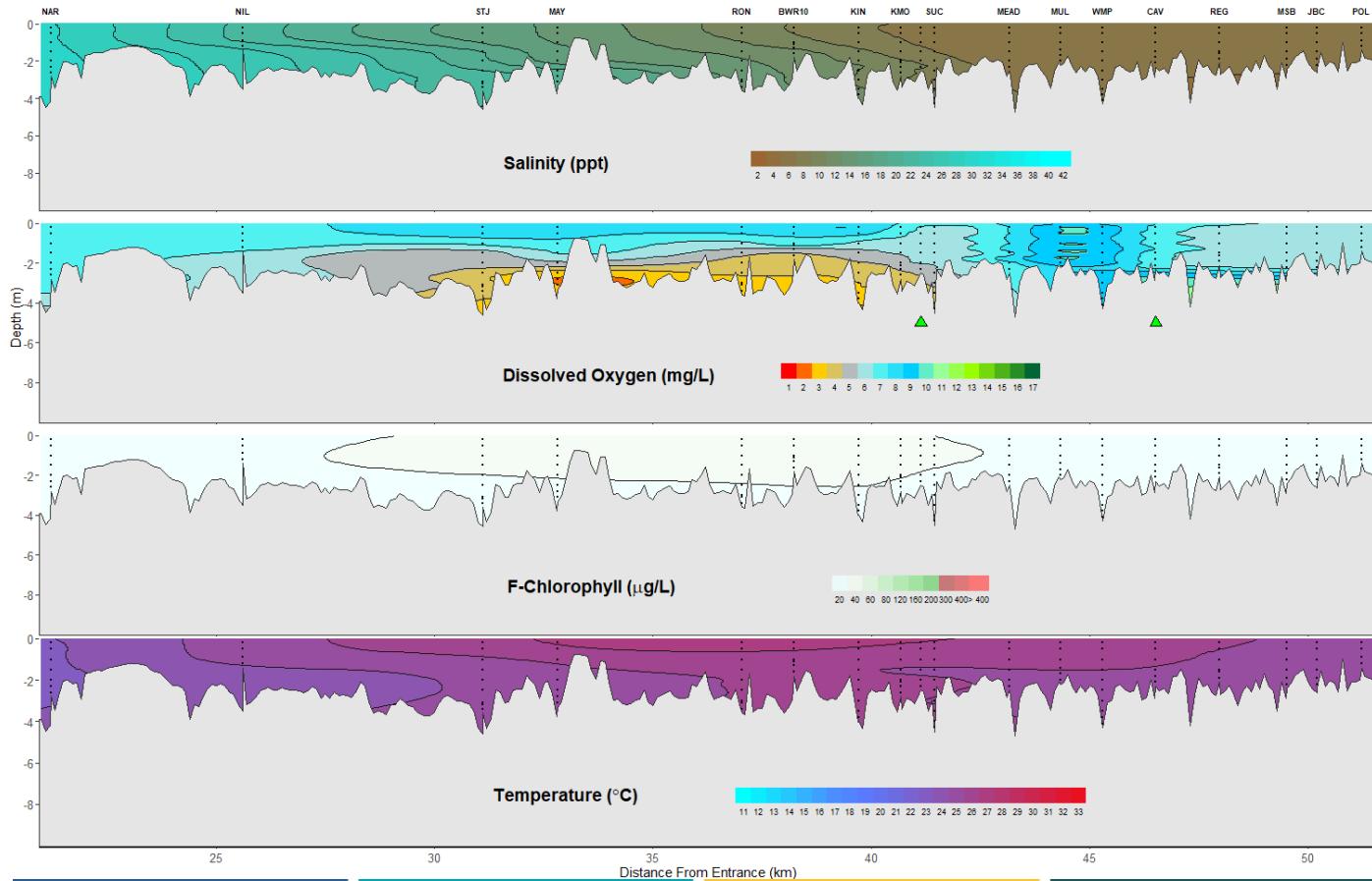
Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles- 7th December 2020





Middle and Upper Swan Estuary- Water Quality Profiles- 7th December 2020



Date: 7th December 2020

Weather & tide conditions: Conditions were clear with a predominantly easterly breeze of up to 8 knots. The predicted tides at Barrack St were 0.95 m at 1:30 am (high tide overnight) and 0.56 m at 12:34 pm (low tide). Perth recorded 0.4 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 (FP1 to NAR): The Lower Swan Canning Estuary was saline. 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 20.6 to 22.8 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated. Bottom waters were low in oxygen at STJ and RON and hypoxic at MAY. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in that area. Water temperature ranged from 23.9 to 26.2 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish between BWR10 and SUC and fresh from MEAD to POL. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen from BWR10 to KMO and at SUC. Chlorophyll fluorescence was highest at KIN indicating higher microalgal activity in that area. Water temperature ranged from 23.8 to 26.8 °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 7th December 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)