



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Swan Canning Estuary Water Quality Monitoring Project

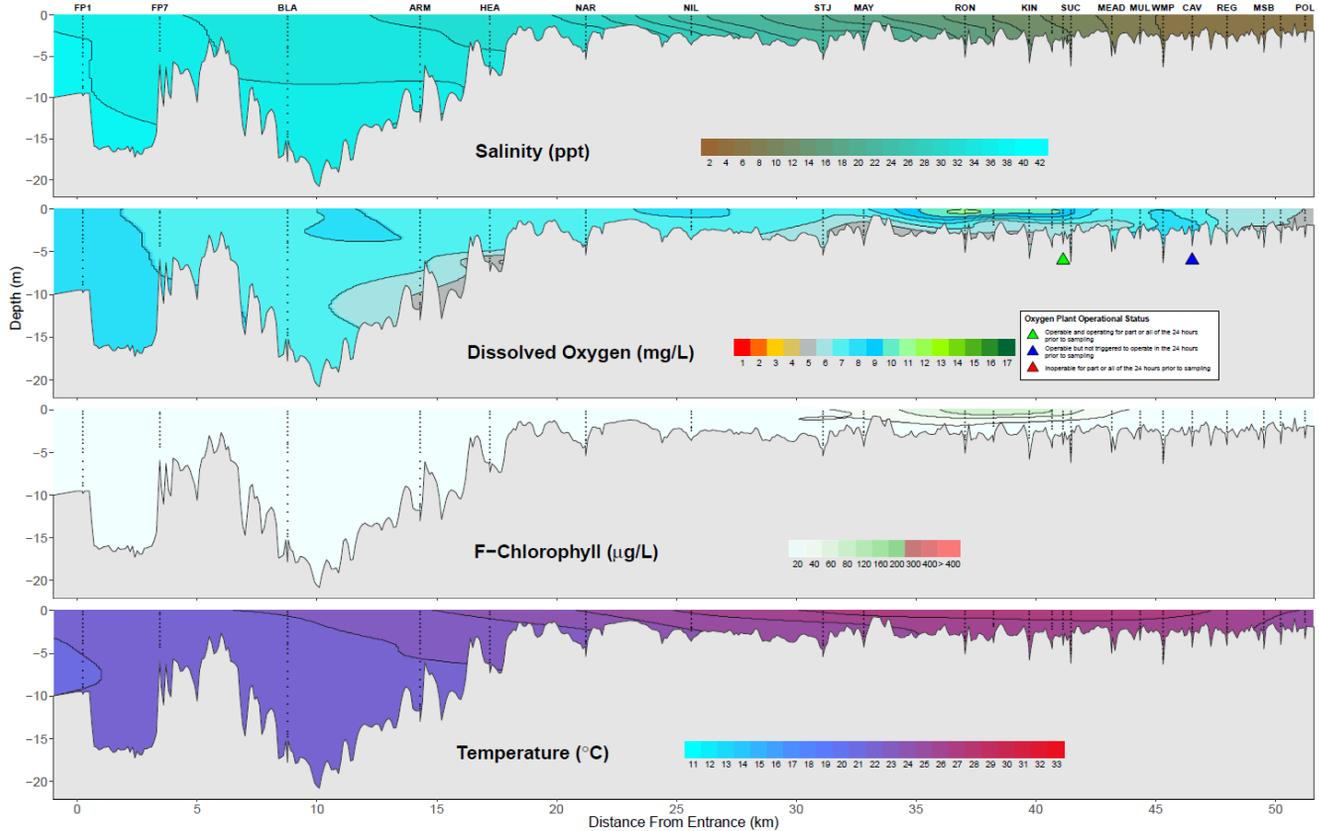
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

25th November 2019

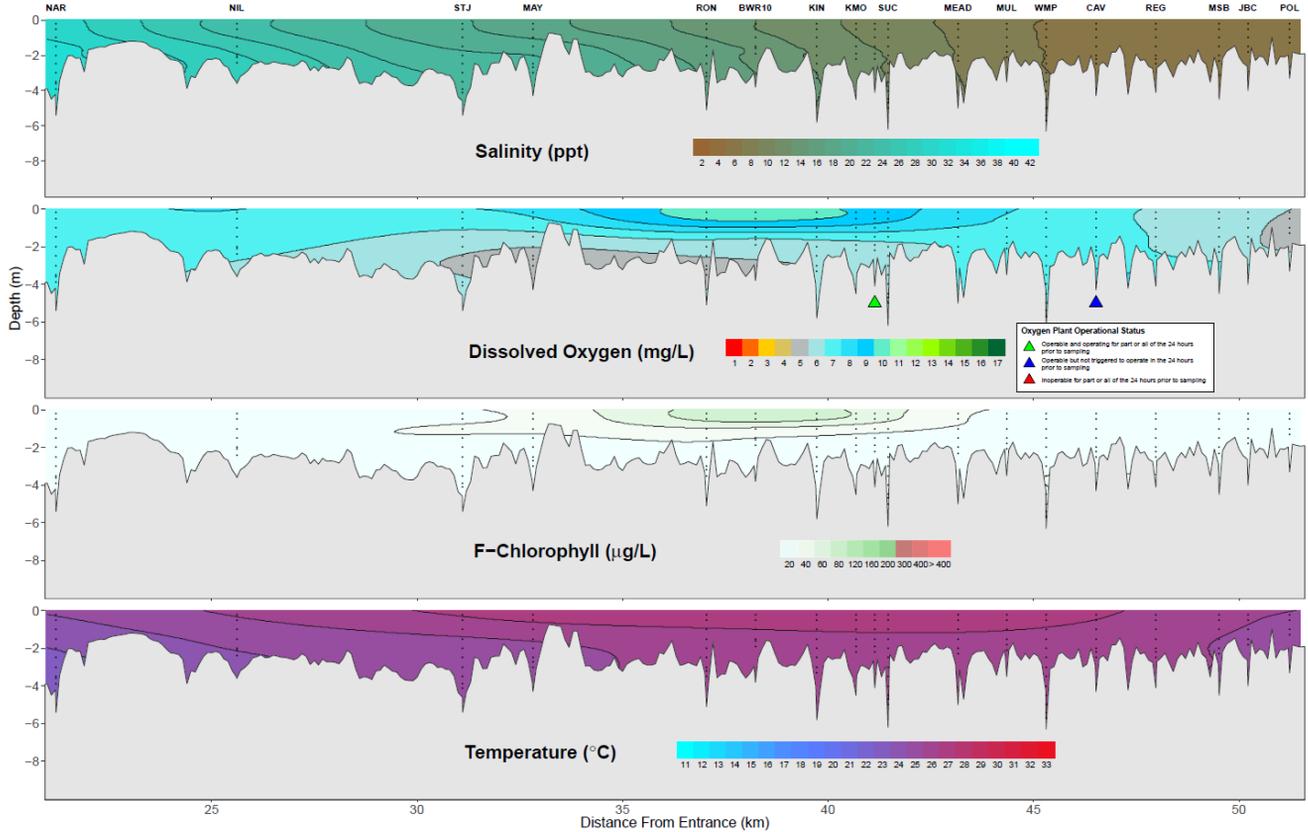
Prepared by

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

Swan River Estuary – Physical-Chemical Profile – 25th Nov 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 25th Nov 2019



Date: 25th November 2019

Weather & tide conditions: Conditions were clear with no cloud cover and a south easterly breeze of up to 9 knots. The predicted tides at Barrack St were 0.54 m (low tide) at 07:01 am and 1.03 m (high tide) at 10:15 pm. Perth recorded 0.4 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were both operational with the Guildford plant being triggered to provide oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (FP1 to NAR): The Lower Swan Canning Estuary was saline from FP1 to NAR. Surface waters in this area were well oxygenated with bottom waters being oxygenated at ARM and HEA. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 20.8 to 27.0 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline at NIL and brackish from STJ to RON. Surface waters were well oxygenated and bottom waters were oxygenated throughout this zone. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in this area. Water temperature ranged from 22.5 to 27.0 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish from BWR10 to CAV and fresh from REG to POL. Surface waters were well oxygenated between BWR10 and CAV and oxygenated between REG and POL. Bottom waters were oxygenated or well oxygenated throughout this zone. Chlorophyll fluorescence was elevated between BWR10 and KMO indicating higher microalgal activity in this area. Water temperature ranged from 24.6 to 27.6 °C.

NB: Profile plots are visual interpolations of measured parameters only. Detailed data are available at wir.water.wa.gov.au.

Recommended reference

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning Estuary water quality monitoring weekly profile report, Lower to Upper Swan Estuary 25th November 2019*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)

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.