



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Swan Canning Estuary Water Quality Monitoring Project

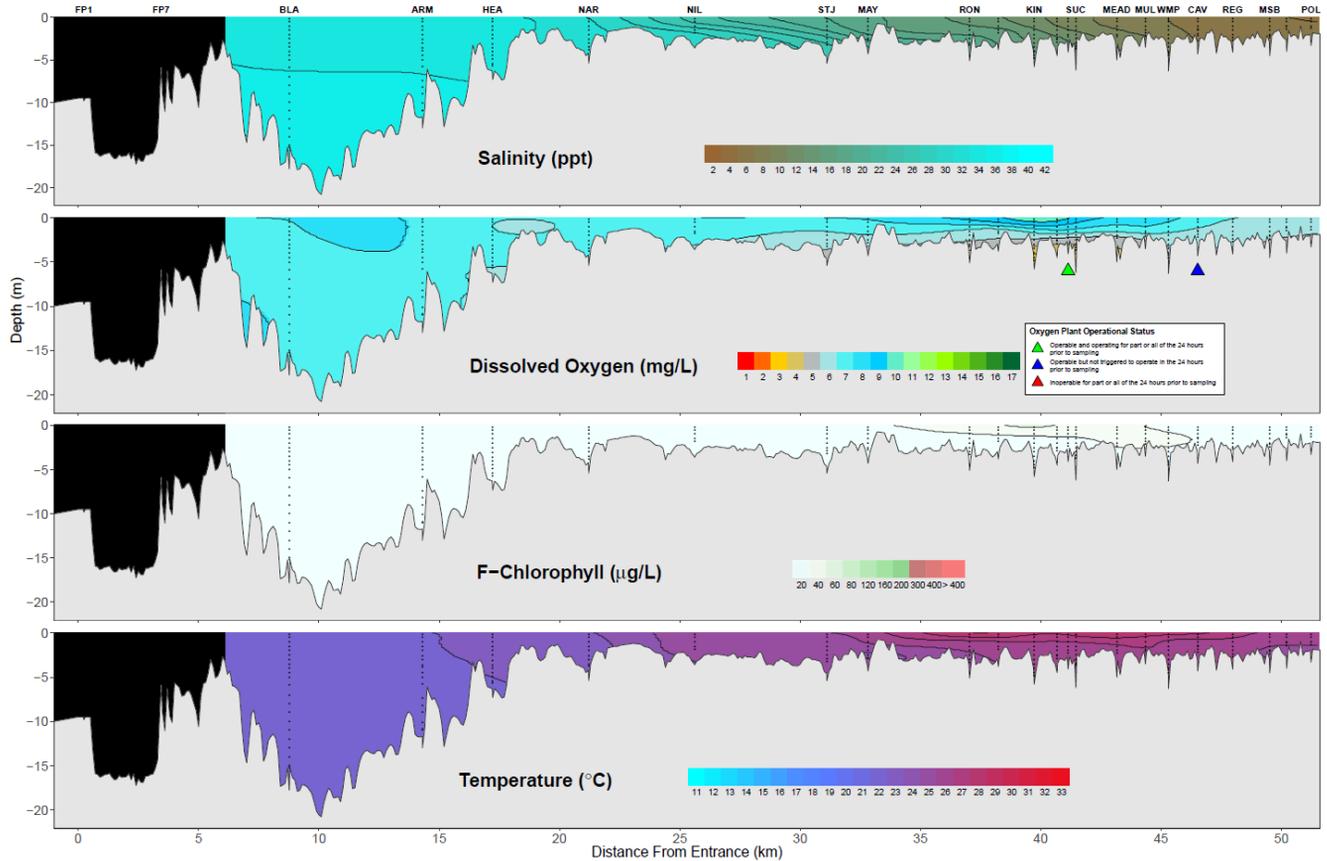
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

2nd December 2019

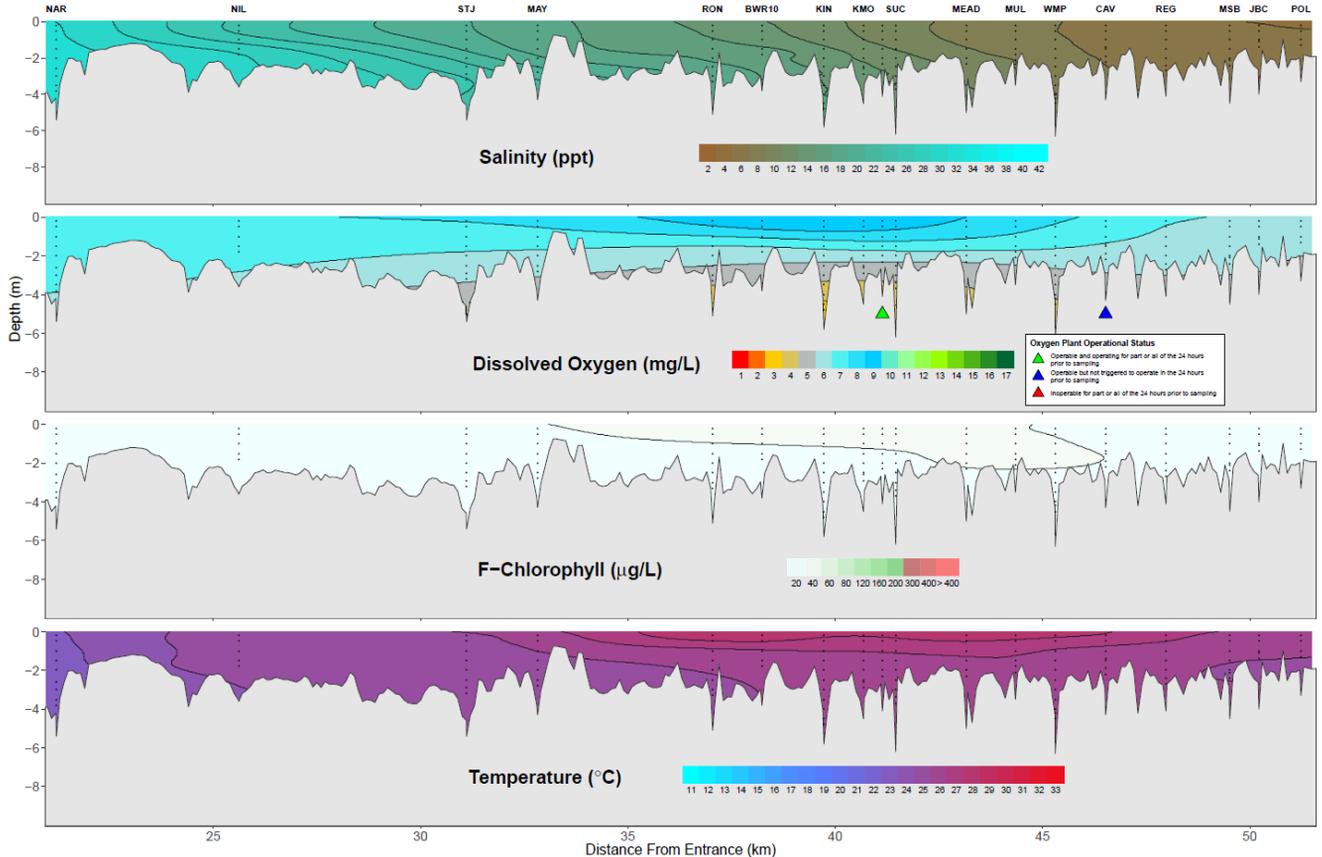
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Swan River Estuary – Physical-Chemical Profile – 2nd Dec 2019



Middle and Upper Swan River Estuary – Physical–Chemical Profile – 2nd Dec 2019



Date: 2nd December 2019

Weather & tide conditions: Conditions were clear with no cloud cover and a largely easterly breeze of up to 12 knots. The predicted tides at Barrack St were 0.97 m at 12:30 am (high tide overnight) and 0.54 m at 11:56 am (low tide). Perth recorded no 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 (BLA to NAR): The Lower Swan Canning Estuary was saline from BLA to NAR. Surface and bottom waters were oxygenated or well oxygenated throughout this zone. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 21.3 to 22.8 °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 23.8 to 28.0 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish from BWR10 to JBC and fresh over brackish at POL. Surface waters were well oxygenated between BWR10 and CAV and oxygenated between REG and POL. Bottom waters were low in oxygen at KIN, KMO and SUC. Chlorophyll fluorescence was highest at VIT and MUL indicating higher microalgal activity in these areas. Water temperature ranged from 24.7 to 27.7 °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 2nd December 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.