



Swan Canning Estuary Water Quality Monitoring Project

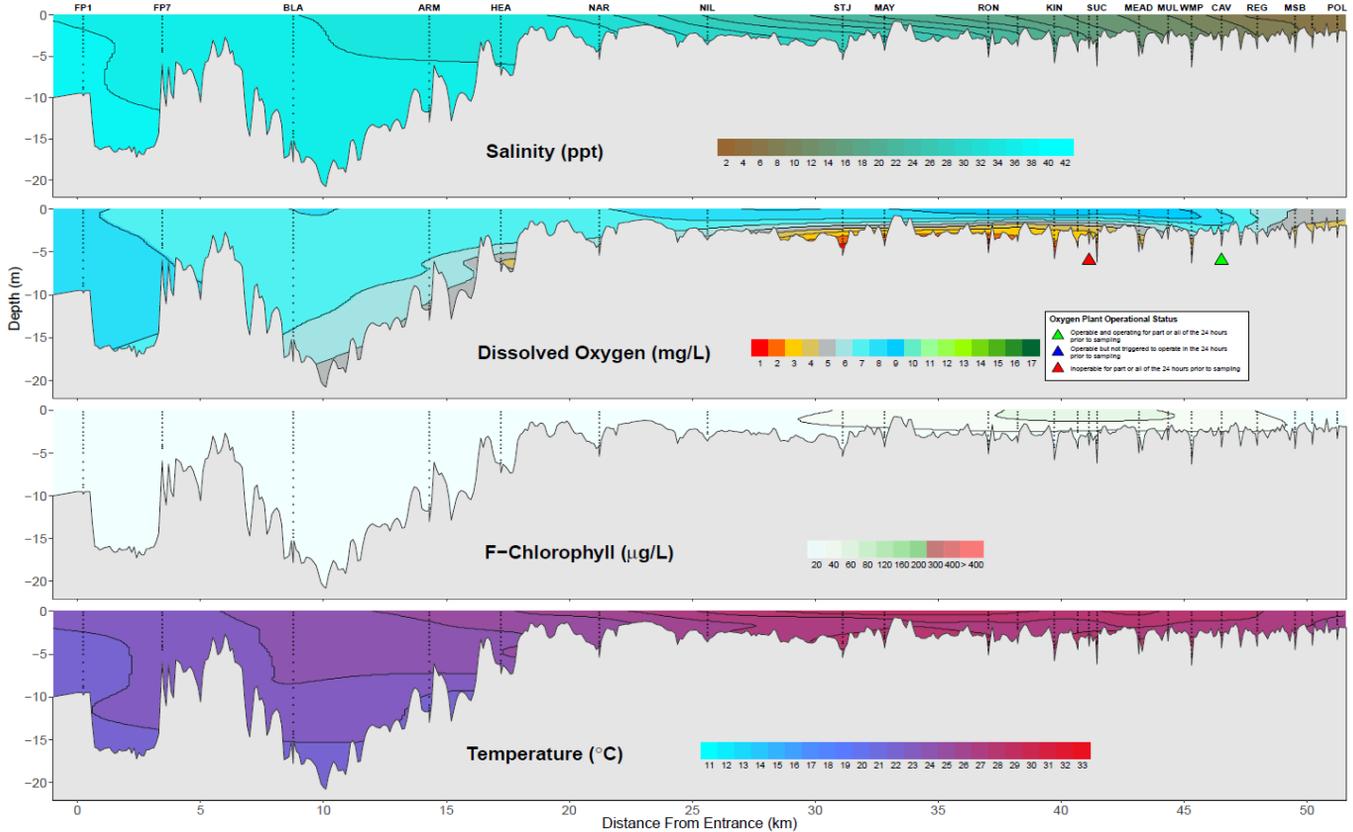
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

9th December 2019

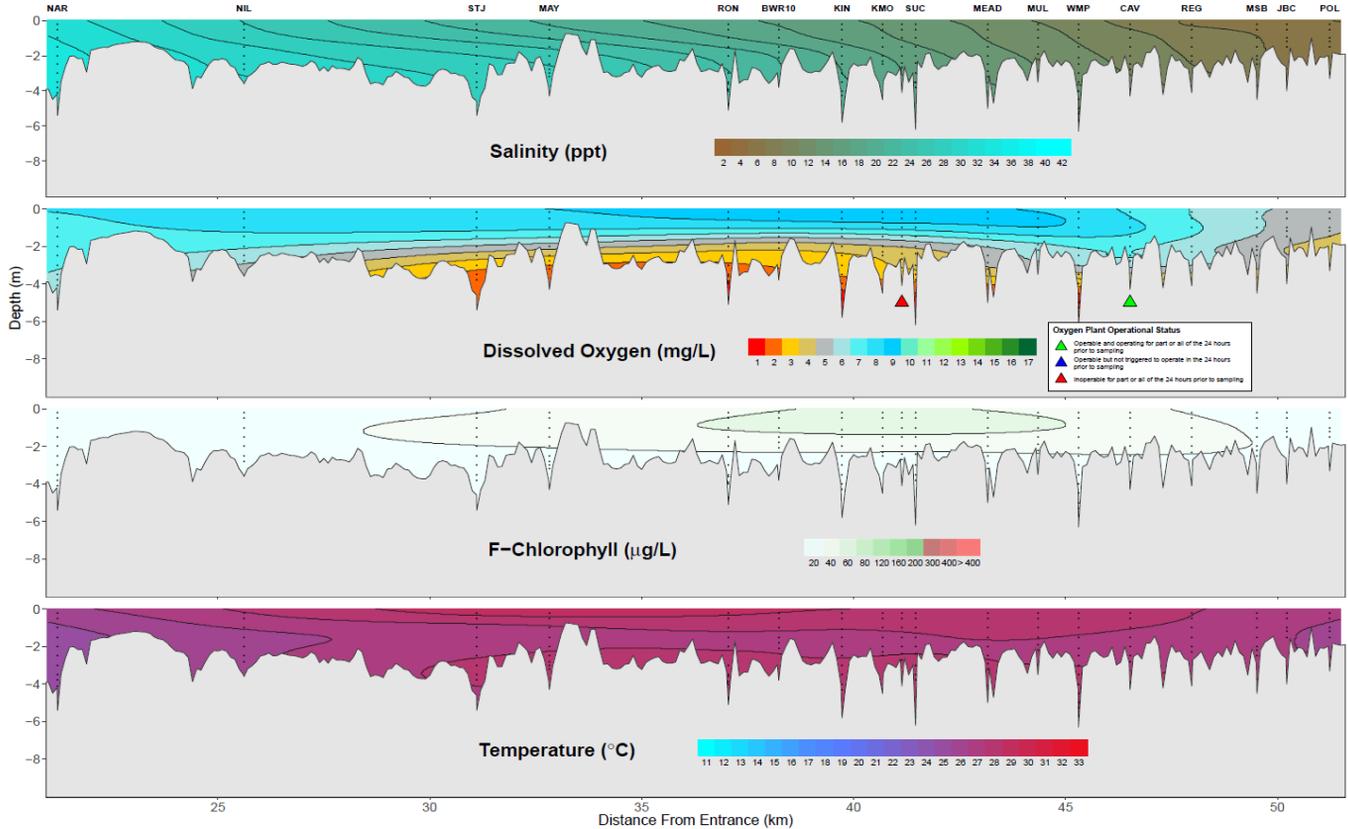
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Swan River Estuary – Physical-Chemical Profile – 9th Dec 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 9th Dec 2019



Date: 9th December 2019

Weather & tide conditions: Conditions were clear with a shifting breeze of up to 7 knots. The predicted tides at Barrack St were 0.6 m at 6:56 am (low tide) and 1.03 m at 9:24 pm (high tide). Perth recorded 0.4 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was not operational and the Caversham oxygenation plant was 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 and bottom waters were oxygenated or well oxygenated throughout this zone except at HEA which was low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 21.6 to 25.5 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL, brackish over saline from STJ to MAY and brackish at RON. Surface waters were well oxygenated throughout this zone. Bottom waters were low in oxygen between NIL and STJ and hypoxic between MAY and RON. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in this area. Water temperature ranged from 25.6 to 28.9 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish throughout. Surface waters were well oxygenated between BWR10 and CAV and oxygenated between REG and POL. Bottom waters were low in oxygen or hypoxic between BWR10 and SUC and at MSB and anoxic at WMP. Chlorophyll fluorescence was highest at KMO indicating higher microalgal activity in this area. Water temperature ranged from 25.7 to 28.3 °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 9th 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.