



Swan Canning Estuary Water Quality Monitoring Project

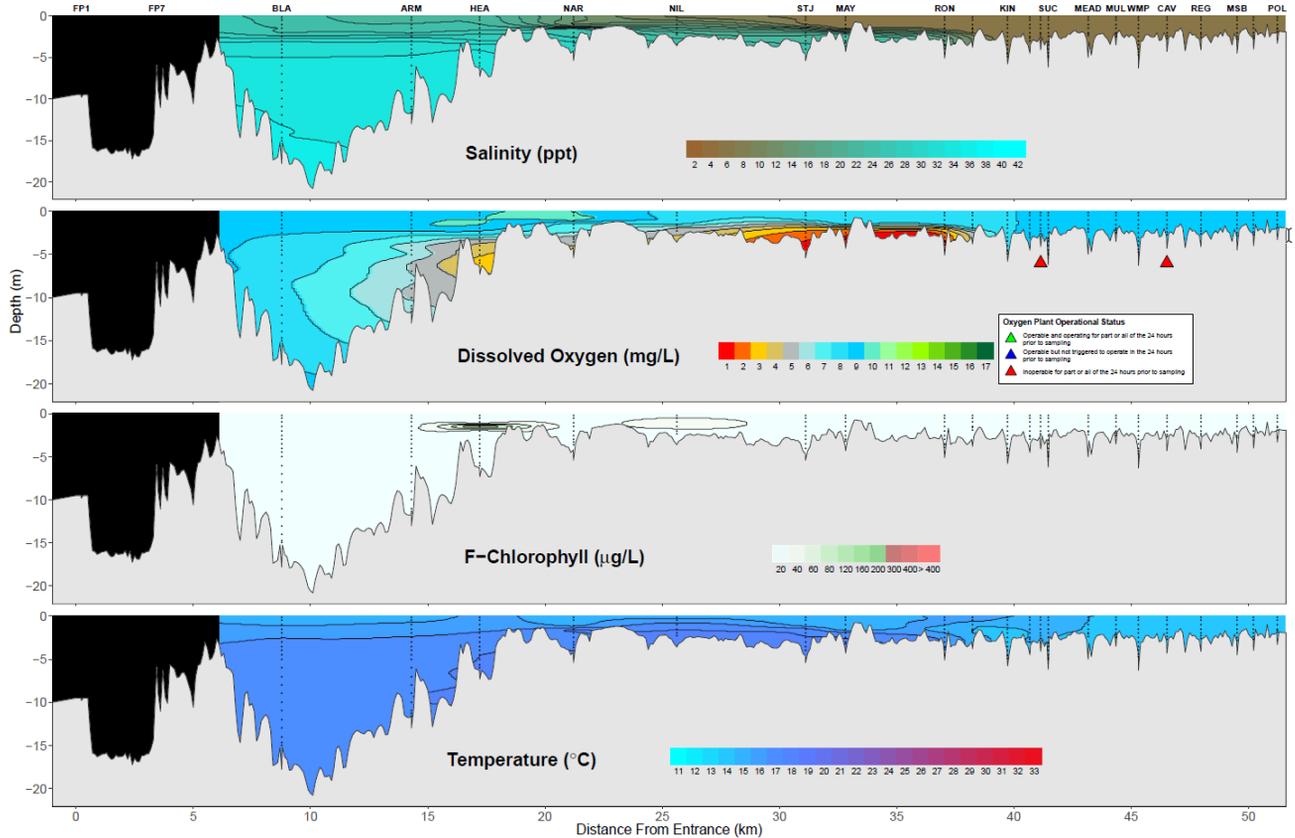
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

26th August 2019

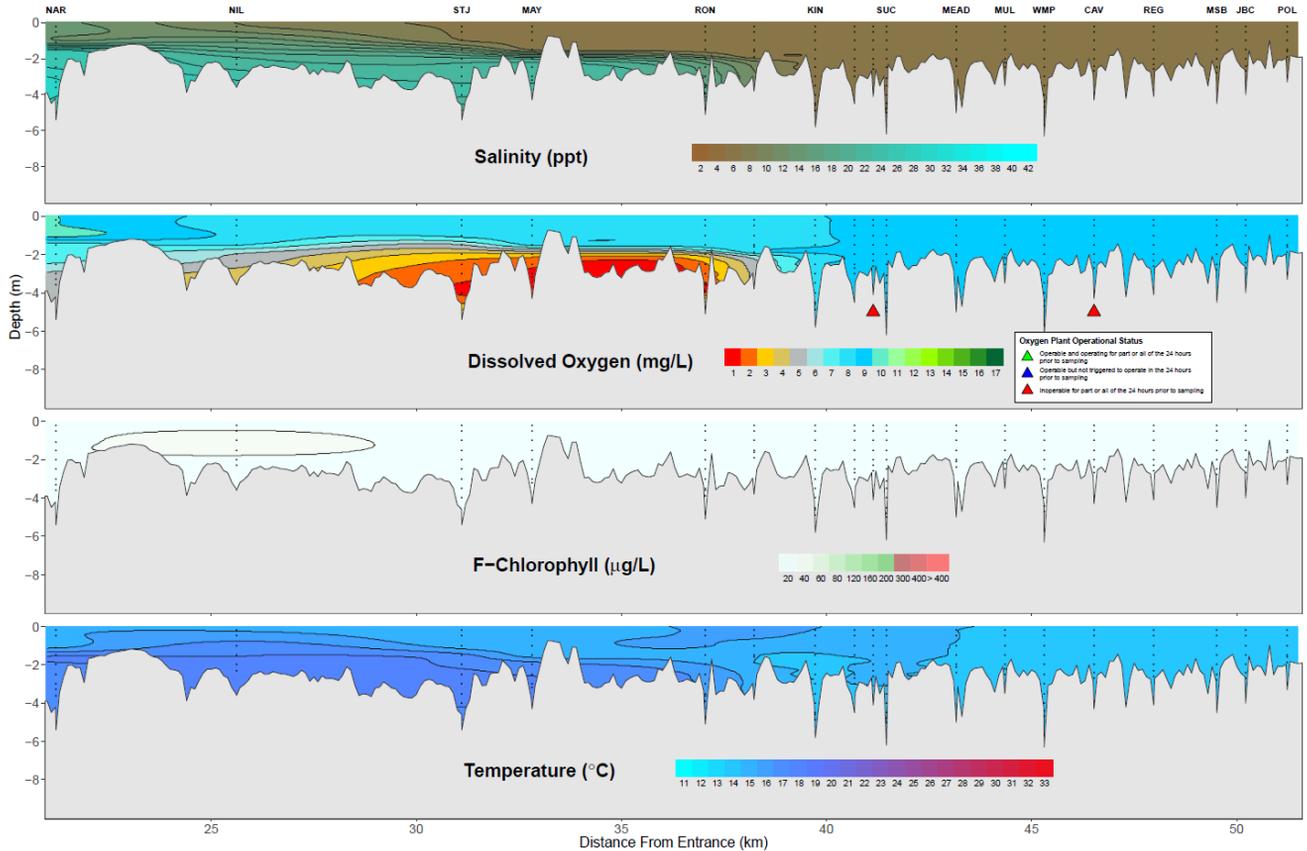
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Swan River Estuary – Physical-Chemical Profile – 26th Aug 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 26th Aug 2019



Date: 26 August 2019

Weather & tide conditions: Conditions were fine with no cloud cover and a predominantly north-easterly breeze of up to 6 knots. The predicted tides at Barrack St were 1.01 m (high tide) at 7:16 am and 0.59 m (low tide) at 6:21 pm. Perth Metro recorded 19.0 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were not operational the week prior to sampling.

Lower Swan-Canning Estuary (FPI to NAR): The Lower Swan-Canning Estuary was brackish over saline from BLA to NAR. The zone was mostly well oxygenated apart from HEA where bottom waters were low in oxygen. Chlorophyll fluorescence was highest at HEA suggesting higher microalgal activity in surface waters in this area. Water temperature ranged from 14.5 to 17.0 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish at NIL with fresh over brackish waters between STJ and RON. Surface waters were well oxygenated throughout with hypoxic bottom waters encountered between STJ and RON. Chlorophyll fluorescence was highest in the surface waters at NIL suggesting higher microalgal activity in this area. Water temperature ranged from 14.5 to 17.2 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was fresh from BWR10 to POL. Waters were well oxygenated throughout this zone and chlorophyll fluorescence was low, suggesting limited microalgal activity. Water temperature ranged from 13.0 to 15.8 °C.

Recommended reference

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Lower to Upper Swan Estuary 26 August 2019*. Rivers and Estuaries Science Program (<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.