



Swan Canning Estuary Water Quality Monitoring Project

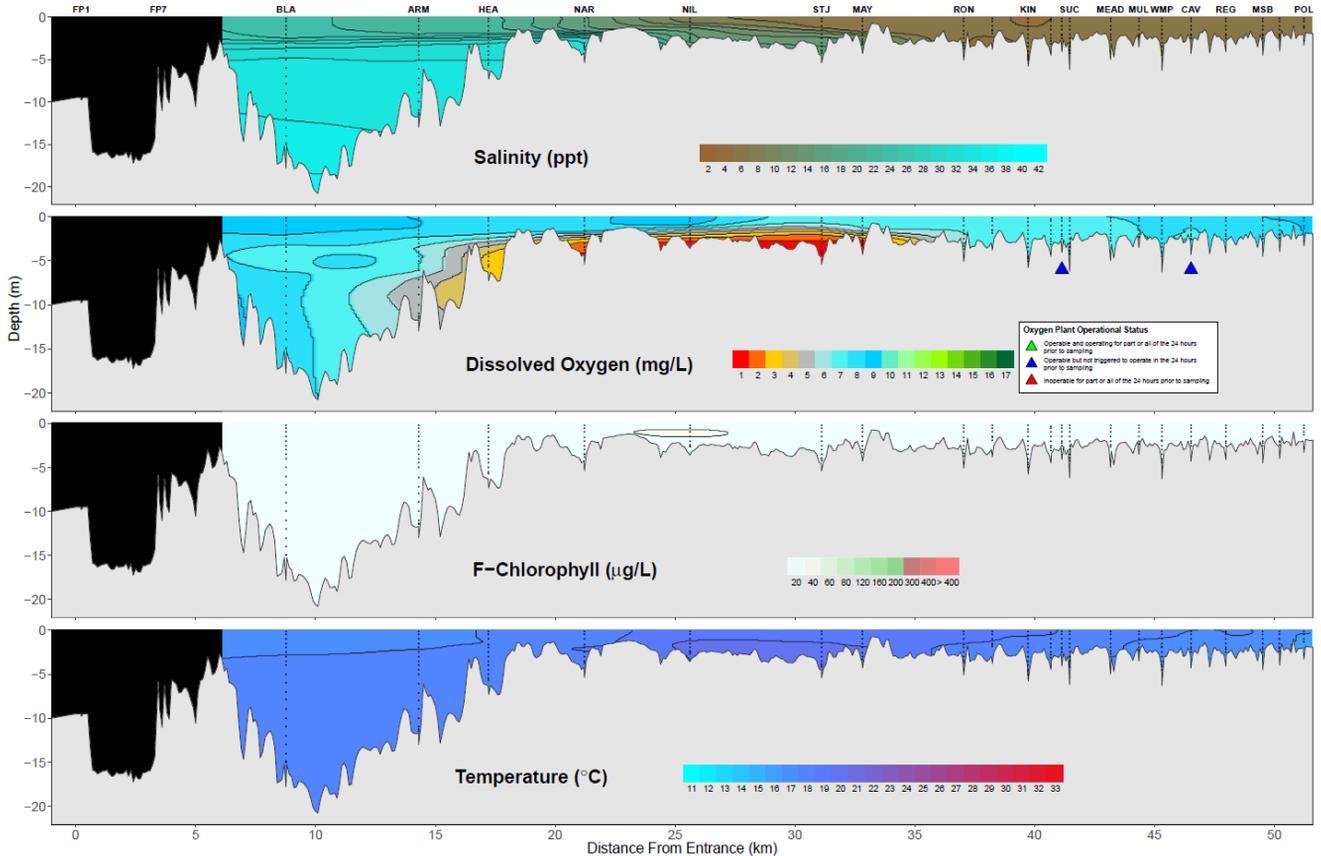
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

23rd September 2019

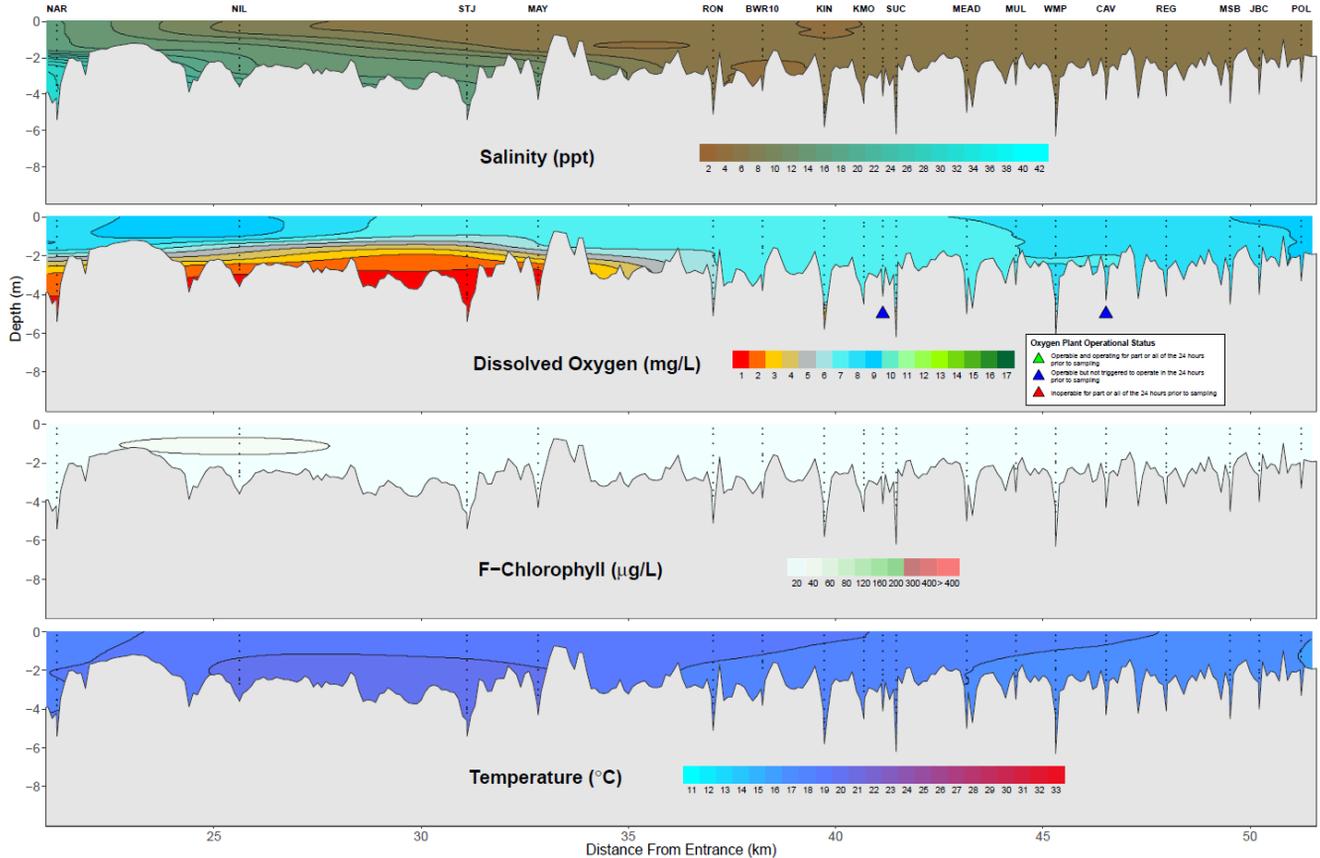
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Swan River Estuary – Physical-Chemical Profile – 23rd Sep 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 23rd Sep 2019



Date: 23rd September 2019

Weather & tide conditions: Conditions were overcast with up to 60% cloud cover and a predominantly north-easterly breeze of up to 10 knots. The predicted tides at Barrack St were 0.96 m (high tide) at 4:46 am and 0.55 m (low tide) at 4:33 pm. Perth recorded 12.4 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

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

Lower Swan-Canning Estuary (BLA to NAR): The Lower Swan-Canning Estuary was brackish over saline from BLA to NAR. Surface waters in this zone were well oxygenated with bottom waters being low in oxygen at HEA and hypoxic at NAR. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.2 to 18.2 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish at NIL, fresh over brackish at STJ and MAY and fresh at RON. Surface waters were well oxygenated throughout the zone with bottom waters being hypoxic at NIL, STJ and MAY. Chlorophyll fluorescence was high at NIL indicating higher microalgal activity in that area. Water temperature ranged from 17.5 to 19.8°C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was fresh from BWR10 to POL. Waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 15.9 to 18.5 °C.

Recommended reference

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Lower to Upper Swan Estuary 23rd September 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.