



Swan Canning Estuary Water Quality Monitoring Project

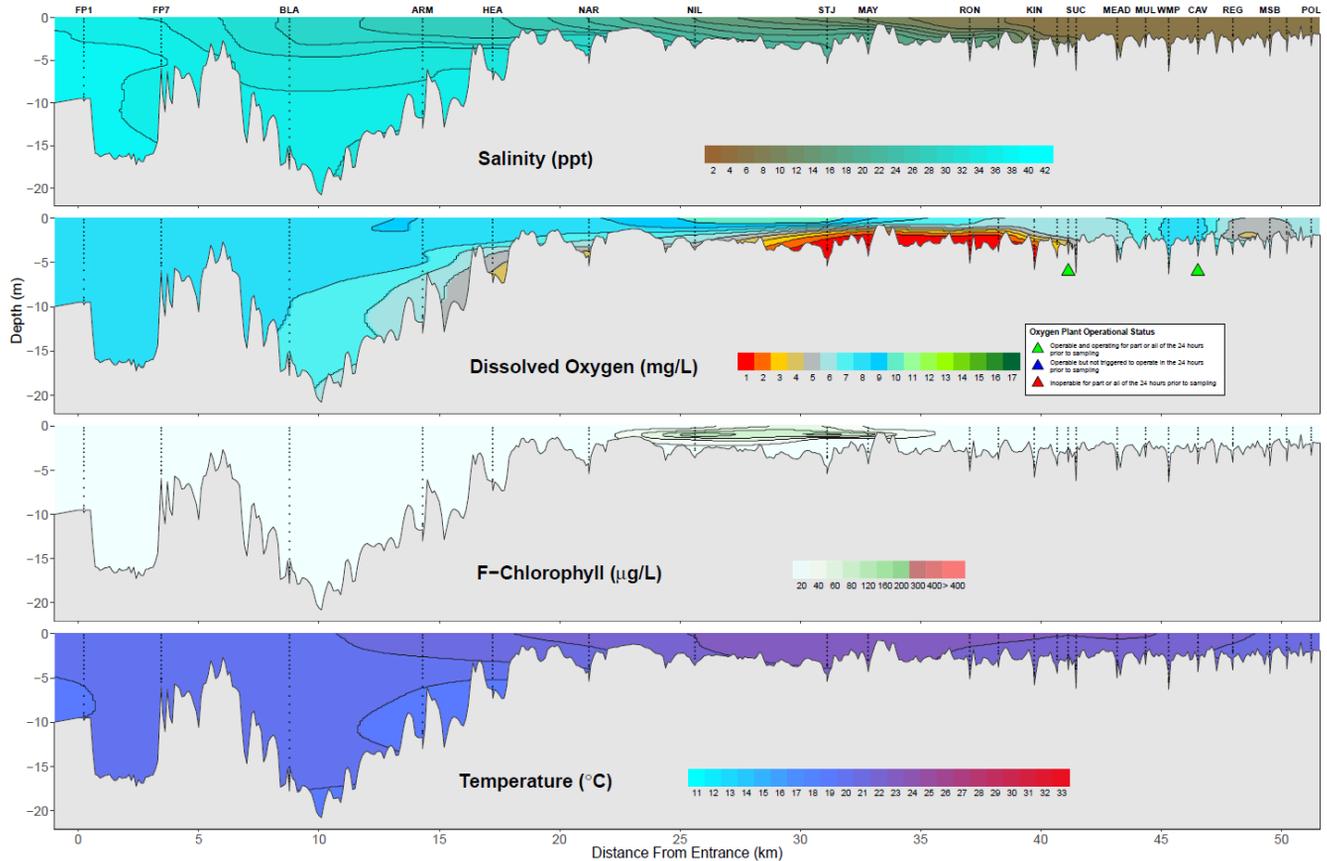
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

14th October 2019

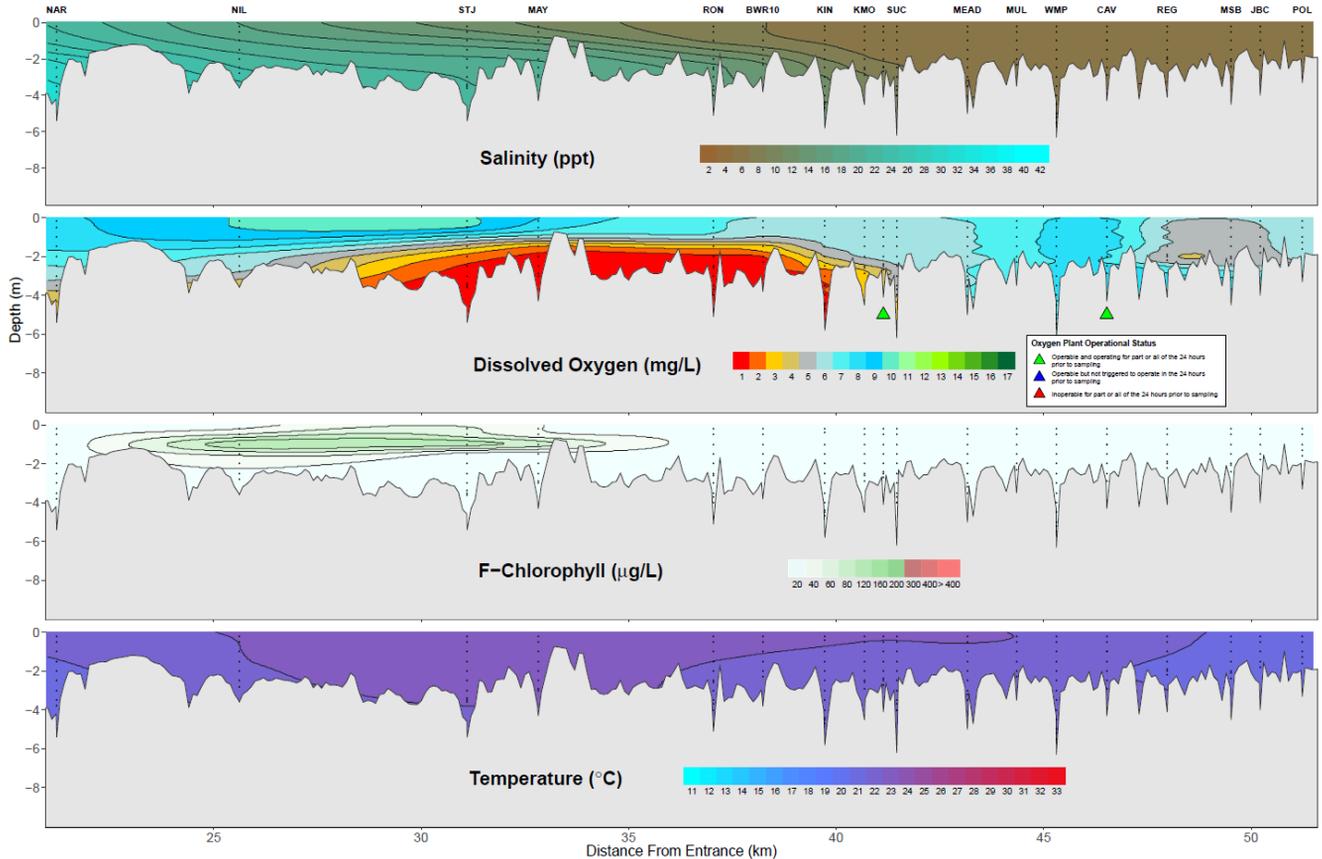
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Swan River Estuary – Physical-Chemical Profile – 14th Oct 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 14th Oct 2019



Date: 14th October 2019

Weather & tide conditions: Conditions were overcast with up to 80% cloud cover and a predominantly south westerly breeze of up to 7 knots. The predicted tides at Barrack St were 0.63 m (low tide) at 5:58 am and 0.78 m (high tide) at 12:05 pm. Perth recorded 4.0 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were triggered to provide oxygen the week prior to sampling.

Lower Swan-Canning Estuary (FP1 to NAR): The Lower Swan-Canning Estuary was saline from FP1 to HEA and brackish over saline at NAR. Surface waters in this zone were well oxygenated with bottom waters being low in oxygen at HEA and NAR. Chlorophyll fluorescence were comparatively low throughout this zone. Water temperature ranged from 18.7 to 21.4 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from NIL to RON. Surface waters were well oxygenated throughout the zone with bottom waters being hypoxic at STJ, MAY and RON. Chlorophyll fluorescence was high at NIL, STJ and MAY indicating higher microalgal activity in these areas. Water temperature ranged from 21.8 to 23.0 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish at BWR10, fresh over brackish from KIN to SUC and fresh from MEAD to POL. Surface waters were oxygenated throughout the zone with bottom waters being hypoxic at BWR10 and KIN and low in oxygen at KMO, VIT and REG. Chlorophyll fluorescence was comparatively low throughout this zone. Water temperature ranged from 20.1 to 22.6 °C.

Recommended reference

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Lower to Upper Swan Estuary 14th October 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.