



Swan Canning Estuary Water Quality Monitoring Project

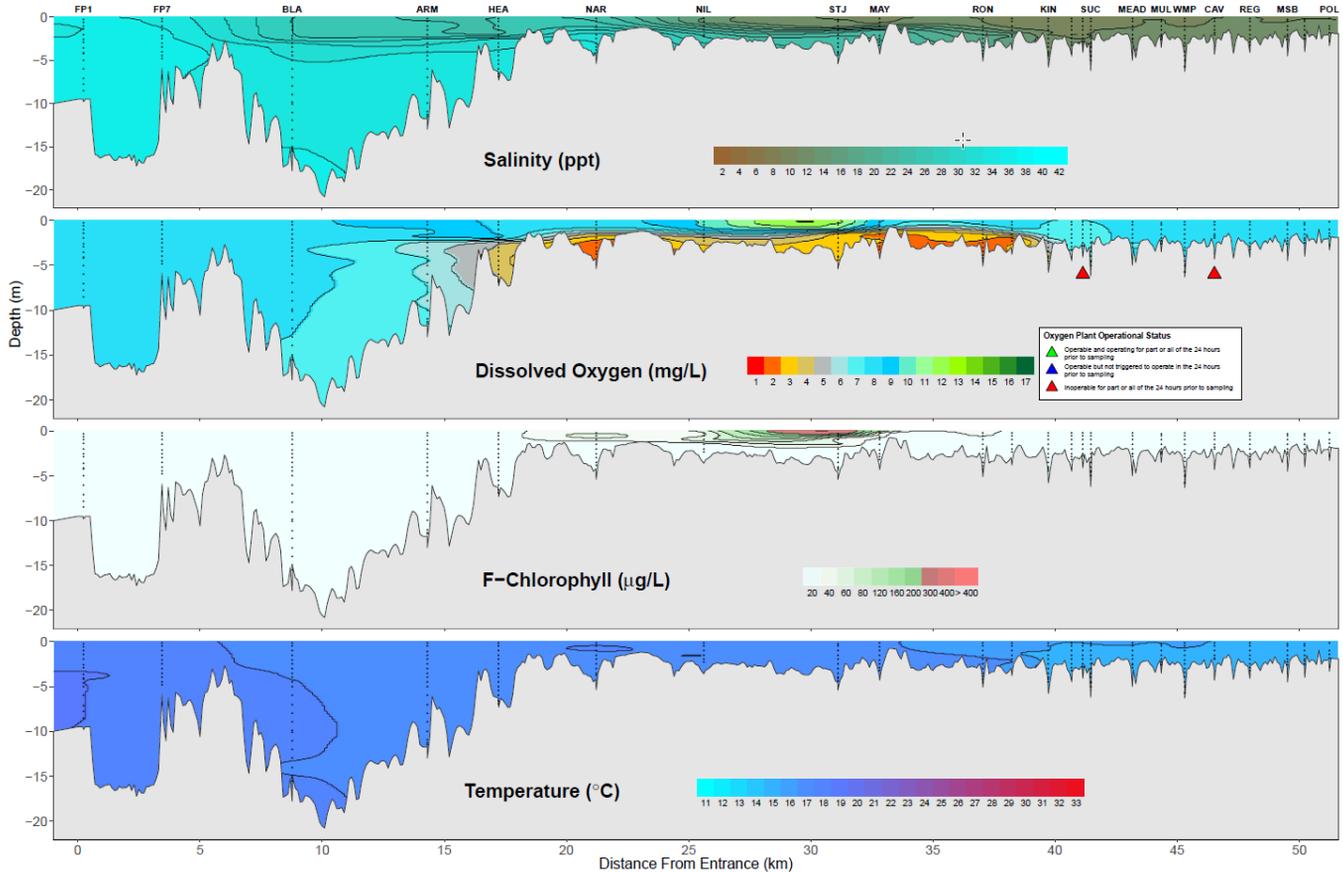
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

5 August 2019

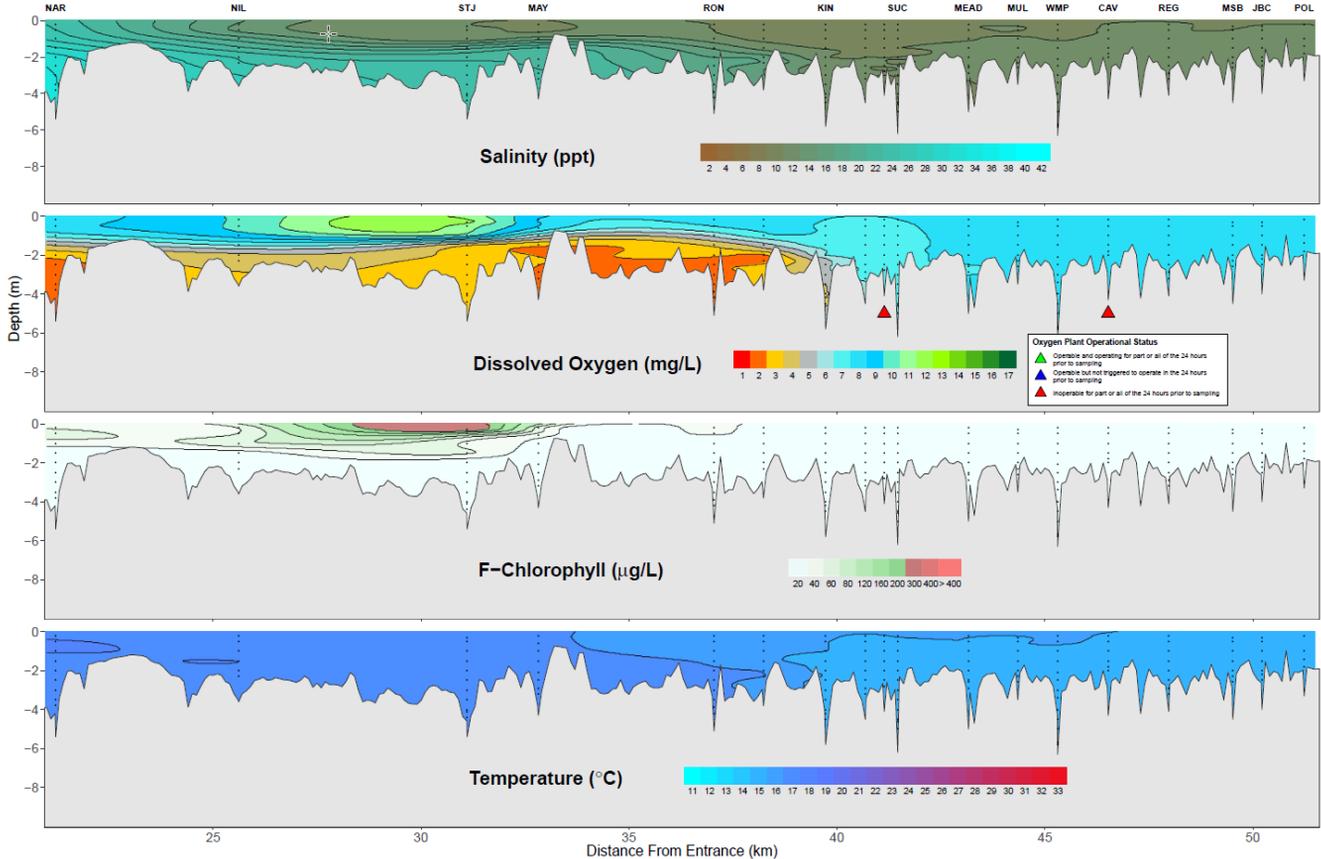
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Swan River Estuary – Physical-Chemical Profile – 5th Aug 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 5th Aug 2019



Date: 5 August 2019

Weather & tide conditions: Conditions were overcast with up to 100% cloud cover and a predominantly north-westerly breeze of up to 4 knots. The predicted tides at Fremantle were 0.8m (high tide) at 12.12pm and 0.6m (low tide) at 8:07pm. Perth recorded 0.2mm 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 (FP1 to NAR): The Lower Swan Estuary was saline from FP1 to BLA and were well oxygenated. From ARM to NAR waters were brackish over saline. ARM was well oxygenated throughout, but bottom waters of HEA and NAR showed some low oxygen and hypoxia at depth. Water temperature ranged from 16.6-18.1°C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from RON to NIL. Surface waters were well oxygenated between RON and NIL (exceeding 11mg/L at STJ) with low oxygen and hypoxic bottom waters. Chlorophyll fluorescence was indicative of a microalgal bloom at STJ. Water temperature ranged from 15.3 to 17°C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish throughout BRW10 to POL. Surface waters were well oxygenated throughout between POL and SUC. From KIN to BWR10 surface waters were well oxygenated with low oxygen and hypoxic bottom waters. Water temperature ranged from 14.5 to 16°C.

Recommended reference

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Lower to Upper Swan Estuary 5 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.