



Swan Canning Estuary Water Quality Monitoring Project

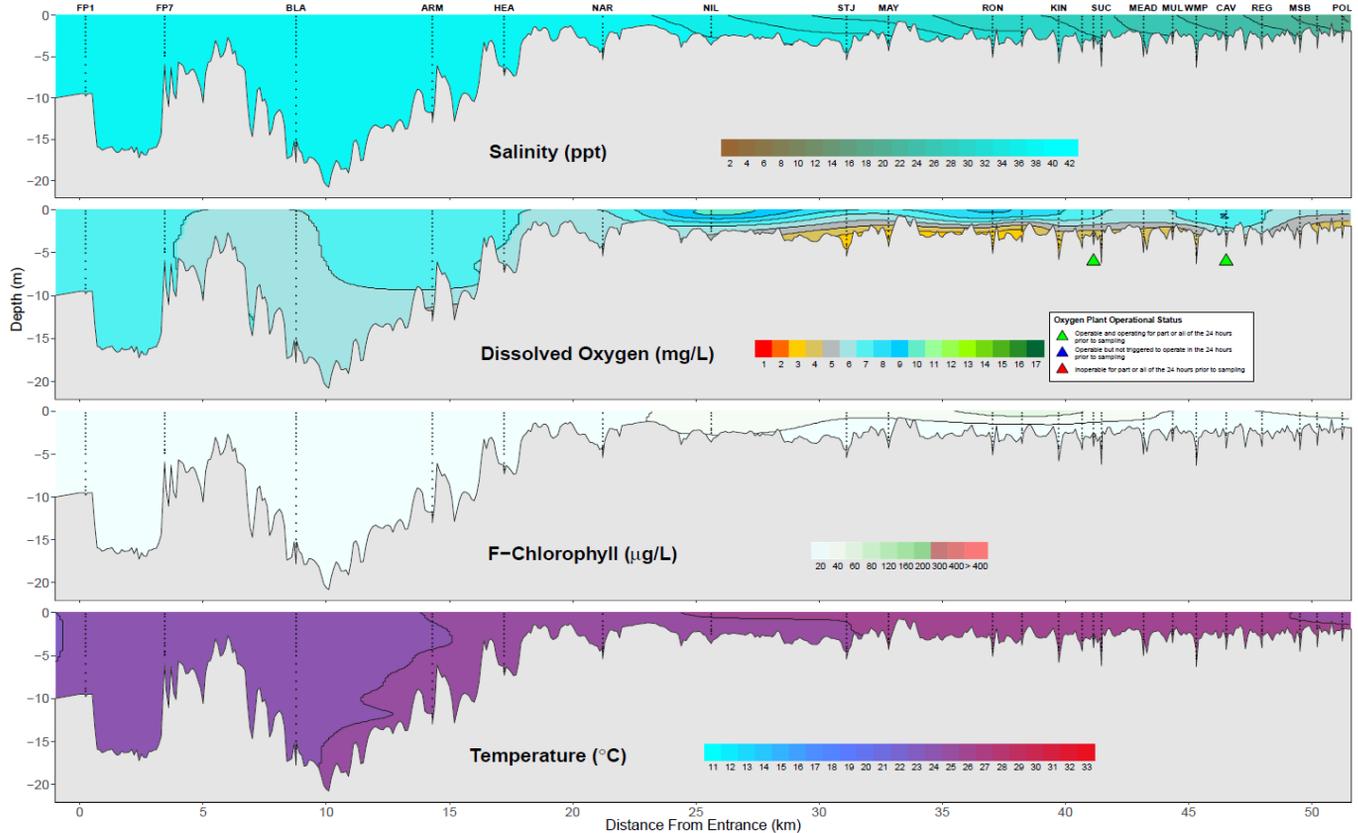
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

16th March 2020

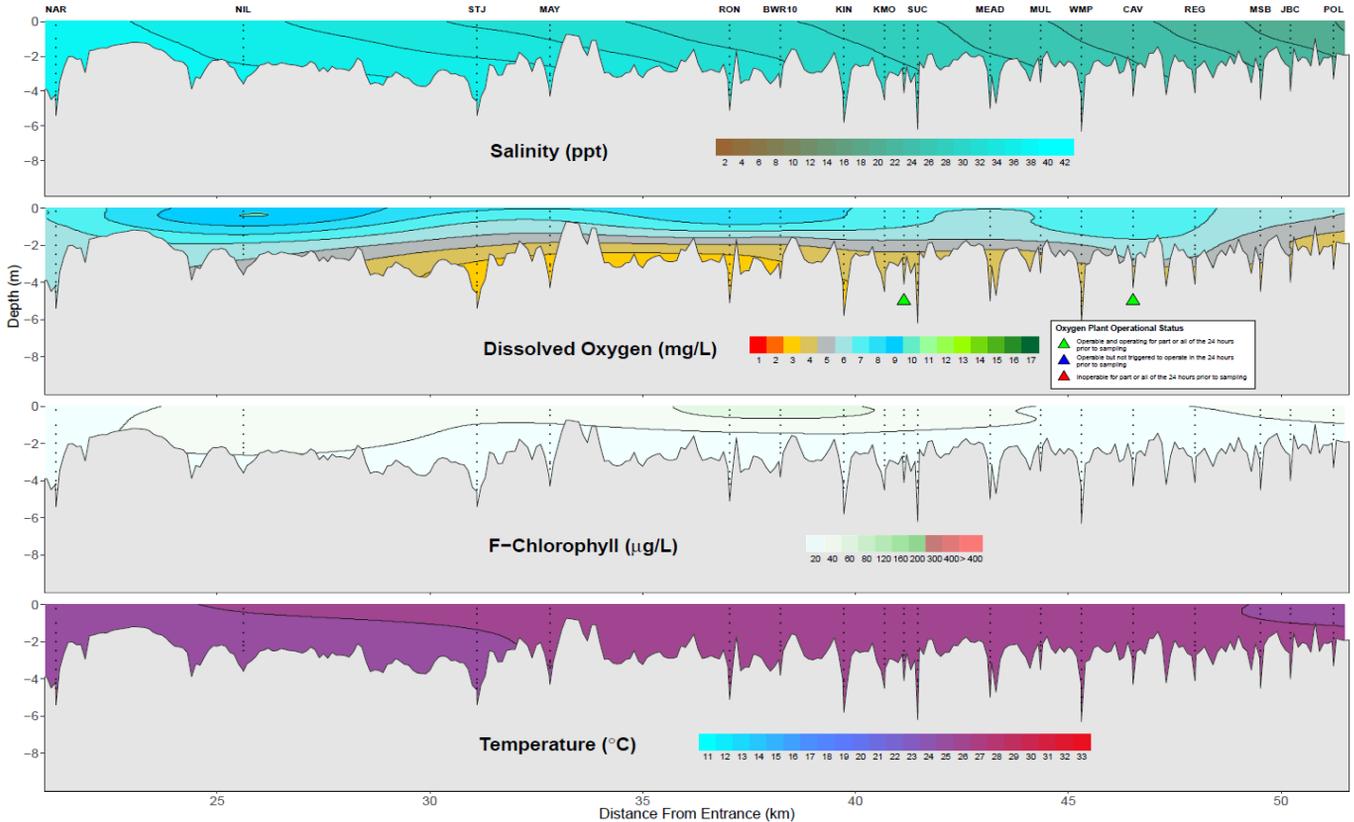
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Swan River Estuary – Physical-Chemical Profile – 16th Mar 2020



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 16th Mar 2020



Date: 16th March 2020

Weather & tide conditions: Conditions were clear with a predominantly light south-easterly breeze of up to 3.5 knots. The predicted tides at Barrack St were 0.55 m at 4:39 am (low tide) and 1.05 m at 3:57 pm (high tide). Perth recorded 8.8mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were both triggered to provide oxygen in the 24 hours prior to sampling.

Lower Swan Canning Estuary (FPI to NAR): The Lower Swan Canning Estuary was saline, waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 23.2 to 24.5 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline and surface waters were oxygenated or well oxygenated throughout this zone. Bottom waters were low in oxygen between STJ and RON. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in that area. Water temperature ranged from 24.1 to 25.9 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was saline between BWR10 and SUC, brackish over saline from MEAD to WMP and brackish from CAV to POL. Surface waters were oxygenated or well oxygenated throughout this zone. Bottom waters were low in oxygen at BWR10, KMO and VIT, between MEAD and WMP and from JBC to POL. Chlorophyll fluorescence was highest at KMO indicating higher microalgal activity in that area. Water temperature ranged from 24.7 to 25.8 °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 16th March 2020*. 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.