



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Swan Canning Estuary Water Quality Monitoring Project

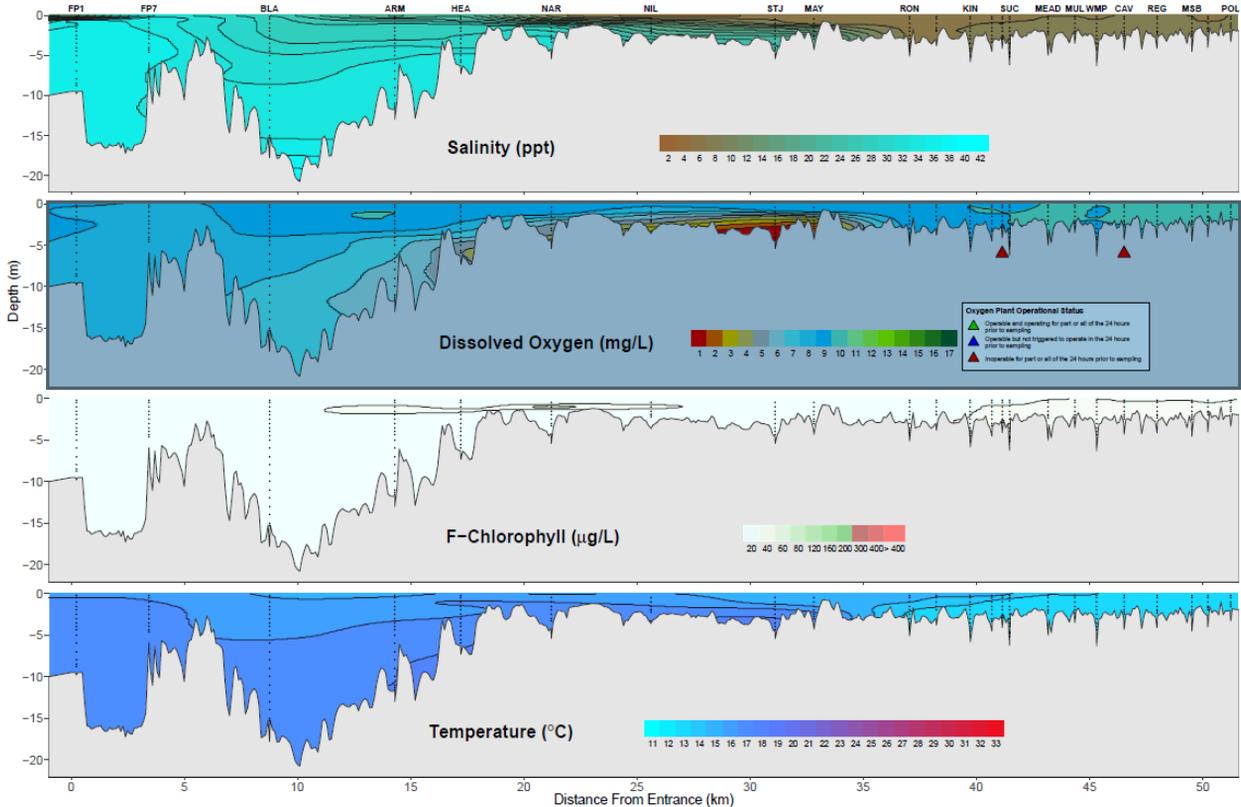
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

19 August 2019

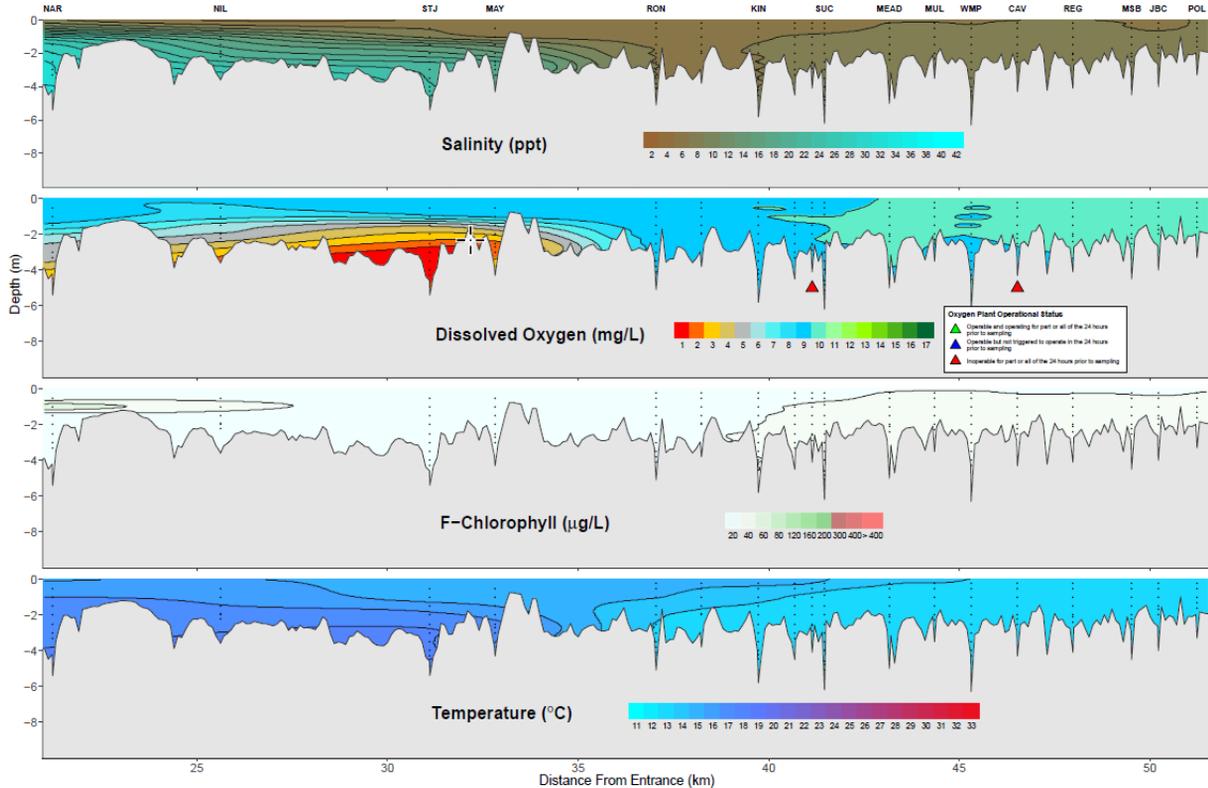
Prepared by

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Swan River Estuary – Physical-Chemical Profile – 19th Aug 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 19th Aug 2019



Date: 19 August 2019

Weather & tide conditions: Conditions were clear skies with no cloud cover and a predominantly north-easterly breezes of up to 7 knots. The predicted tides at Barrack St were 0.7m (low tide) at 5:39am and 0.95m (high tide) at 12.17pm and. Perth recorded 38mm of rainfall during the week prior to sampling (Bureau of Meteorology).

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

Lower Swan-Canning Estuary (FPI to NAR): The Lower Swan Estuary from FP1 to BLA was predominantly saline. Between ARM and NAR conditions were brackish over saline. The zone was oxygenated throughout. Chlorophyll fluorescence was highest at NAR suggesting higher microalgal activity in surface waters in this area and upstream. Water temperature ranged from 15.8-17.0°C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish throughout. Surface waters were well oxygenated with low oxygen and hypoxic bottom waters encountered between NIL and MAY. RON was well oxygenated throughout. Water temperature ranged from 12.7 to 17.2°C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish and well oxygenated throughout. Water temperature ranged from 12.0 to 14.8°C.

Recommended reference

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Lower to Upper Swan Estuary 19 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.