



Swan Canning Estuary Water Quality Monitoring Project

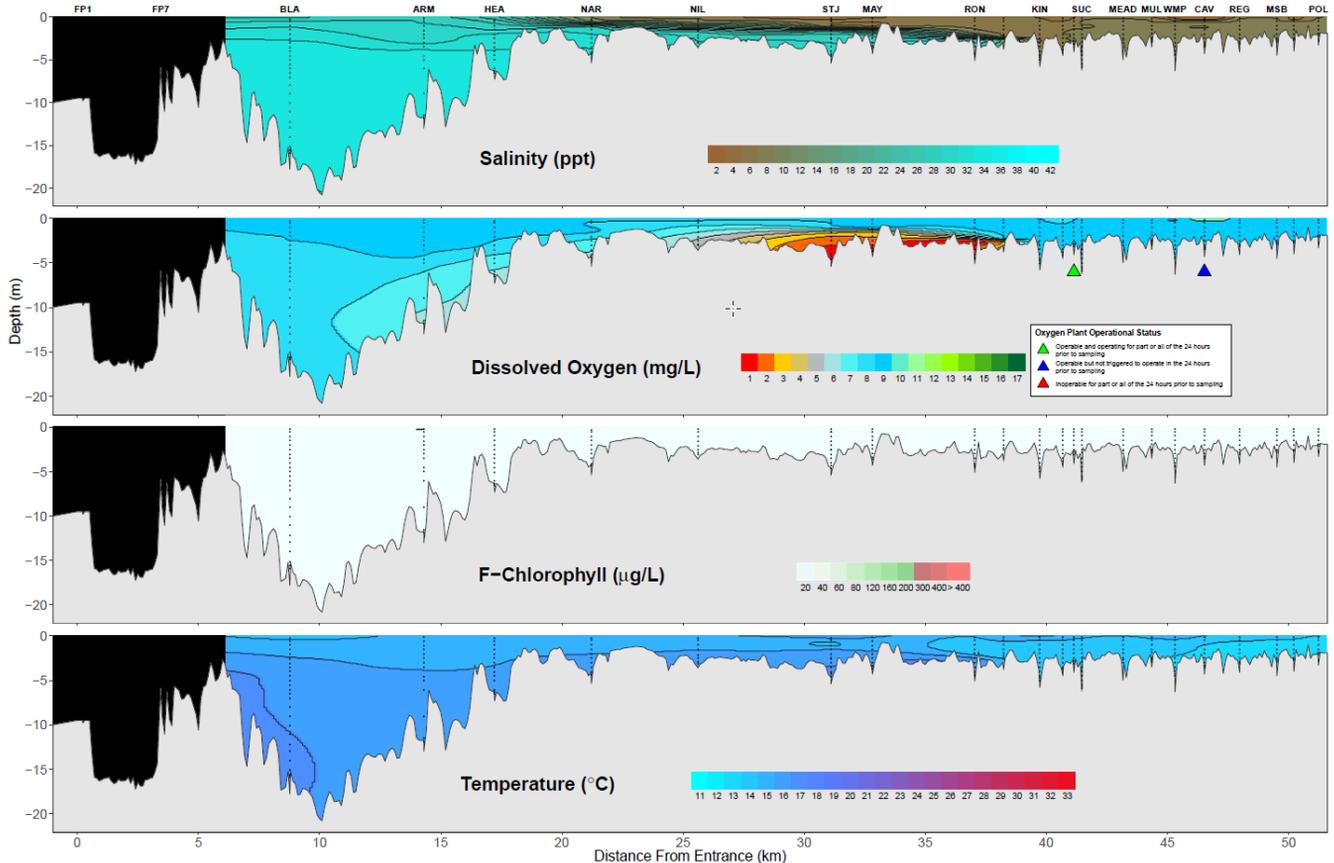
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

1 July 2019

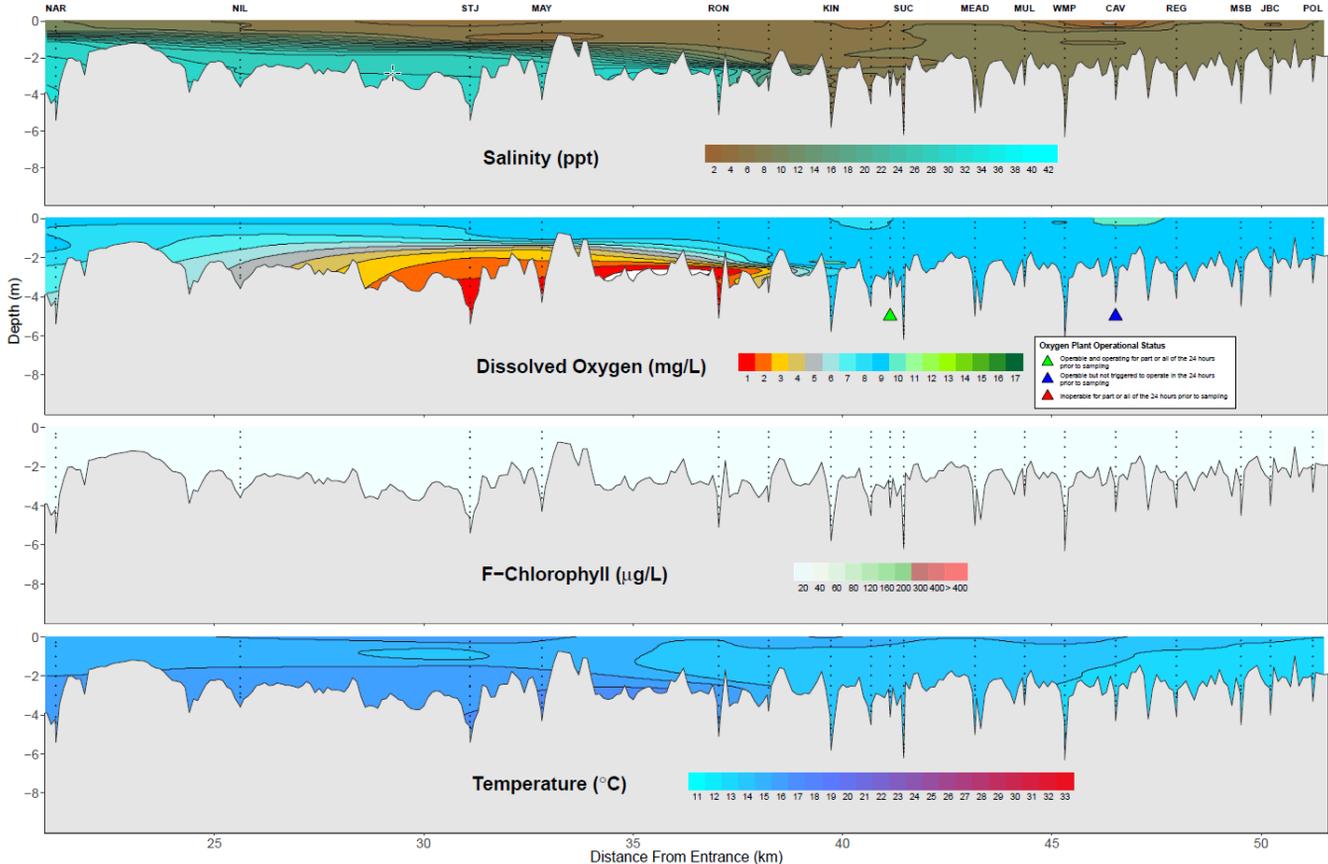
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Swan River Estuary – Physical–Chemical Profile – 1st Jul 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 1st Jul 2019



Date: 1 July 2019

Weather & tide conditions: Conditions were becoming overcast with up to 80% cloud cover and a predominantly north easterly breeze of up to 4 knots. The predicted tides at Guildford were 1.25 m (high tide) at 10:31 and 0.69 m (low tide) at 21:07. Perth recorded 31.8mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were operational the week prior to sampling.

Lower Swan-Canning Estuary (FPI to NAR): The Lower Swan Estuary was saline from BLA to HEA and brackish over saline at NAR. Water was oxygenated to well oxygenated throughout all sites. Water temperature ranged from 13.8 to 16.1°C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline at NIL and STJ, and fresh over saline at MAY and RON. Surface water was well oxygenated throughout however bottom water was hypoxic at MAY and anoxic at STJ and RON. Chlorophyll fluorescence was low throughout, indicating low microalgae activity. Water temperature ranged from 13.4 to 16.1°C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish throughout. Water was well oxygenated throughout with the exception of low oxygen bottom water at BWR10. Water temperature ranged from 12.9 to 15.2°C.

Recommended reference

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Swan Estuary 1 July 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.