



Swan Canning Estuary Water Quality Monitoring Project

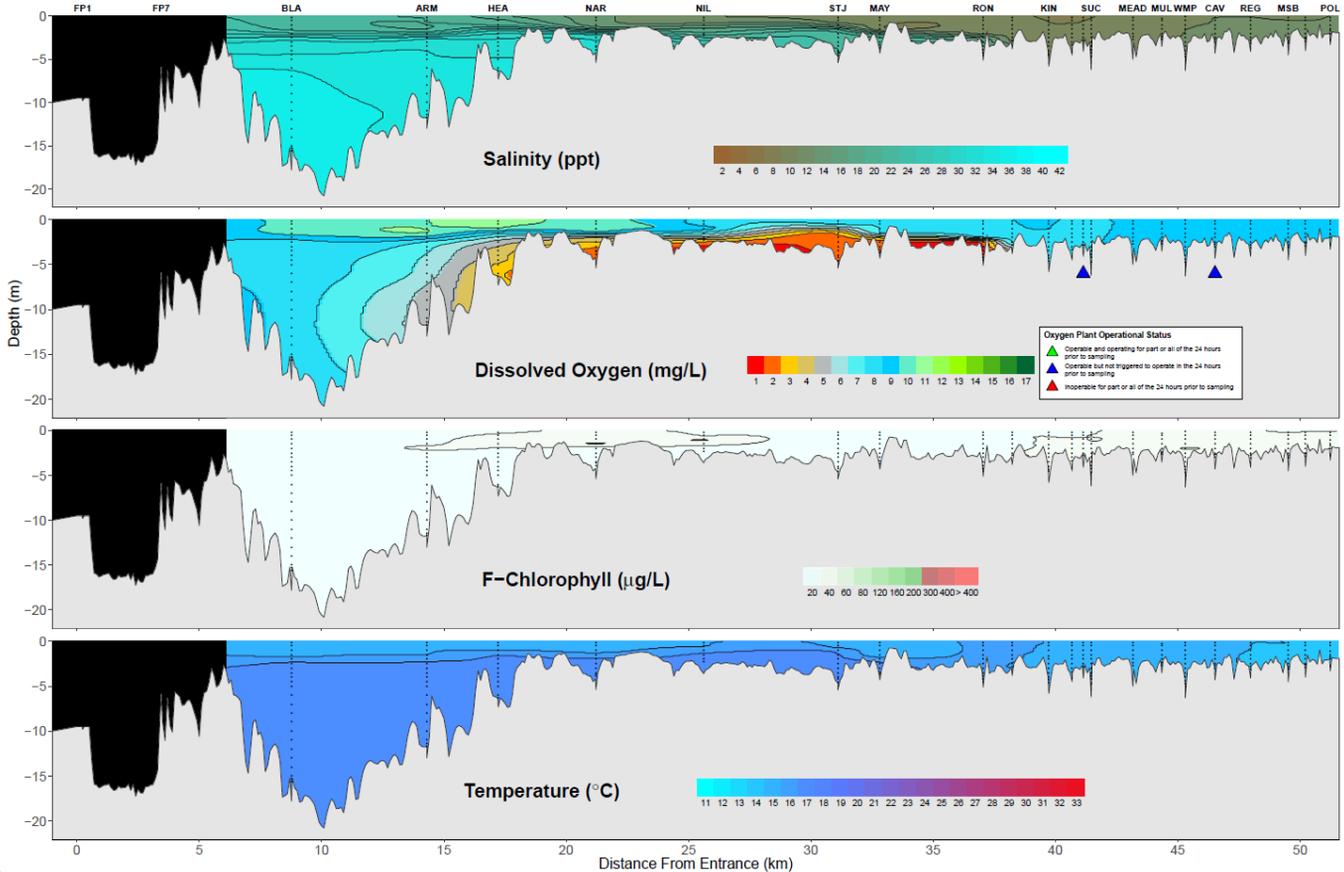
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

29 July 2019

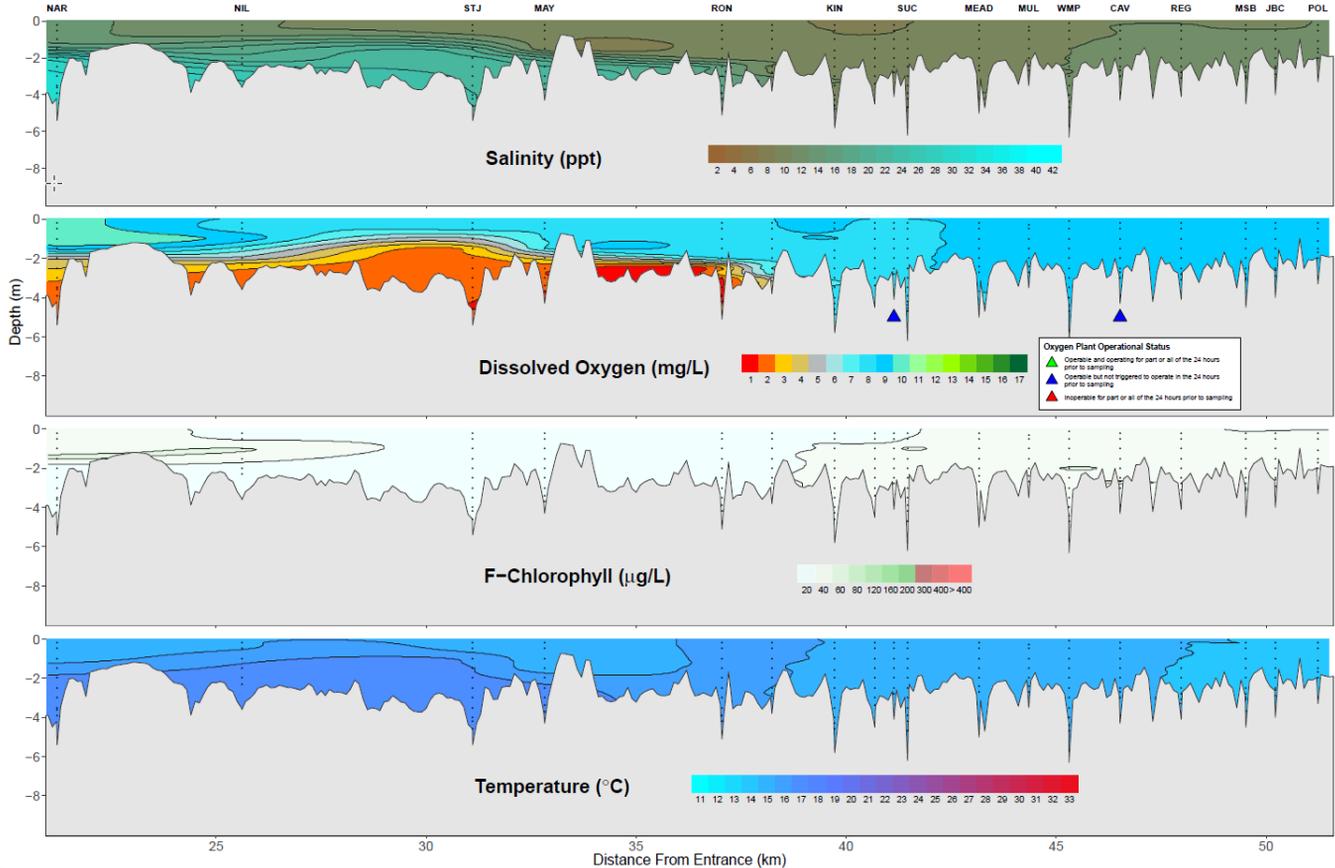
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Swan River Estuary – Physical-Chemical Profile – 29th Jul 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 29th Jul 2019



Date: 29 July 2019

Weather & tide conditions: Conditions were overcast with up to 40% cloud cover and a predominantly east to north-easterly winds up to 7.5 knots. The predicted tides at Guildford were 1.17 m (high tide) at 08:45 and 0.64 m (low tide) at 19:37. Perth recorded 13.4 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

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

Lower Swan-Canning Estuary (FP1 to NAR): The Lower Swan Estuary was brackish over saline from BLA to NAR. Lower reaches (BLA and ARM) were well oxygenated, with some low oxygen and hypoxia occurring in bottom waters of HEA and NAR, respectively. Chlorophyll fluorescence was highest at NAR. Water temperature ranged from 14.4 to 16.8°C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish throughout. Surface water was well oxygenated with hypoxic and anoxic bottom waters. Chlorophyll fluorescence was highest at NIL and indicative of higher microalgal activity in that area. Water temperature ranged from 14.3 to 16.3°C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish and well oxygenated throughout. Chlorophyll fluorescence was indicative of high microalgal activity. Water temperature ranged from 13.7 to 15.5°C.

Recommended reference

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Swan Estuary 29 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.