



# Swan Canning Estuary Water Quality Monitoring Project

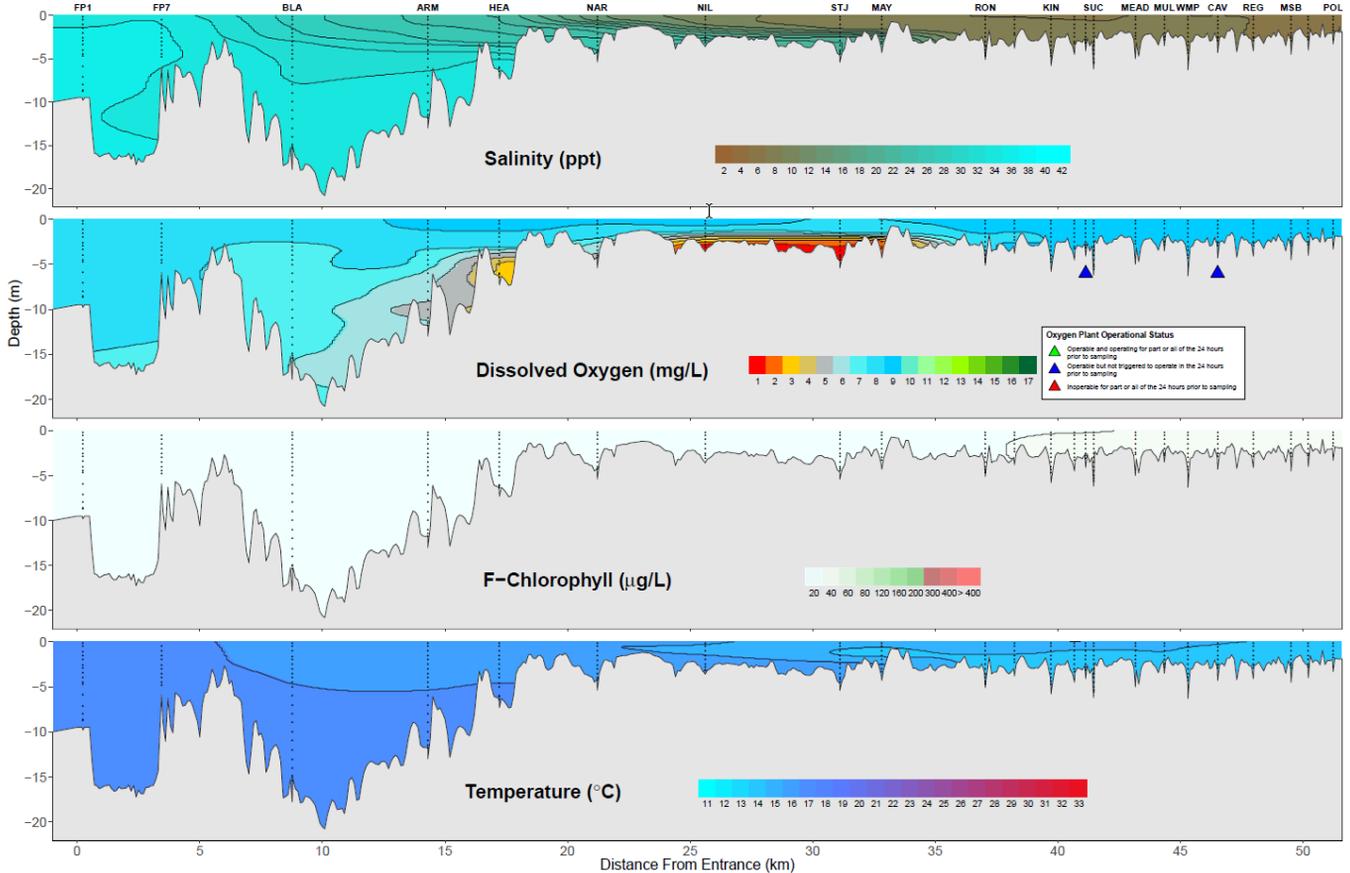
**Weekly Profile Report for the  
Lower to Upper Swan Estuary**

**22 July 2019**

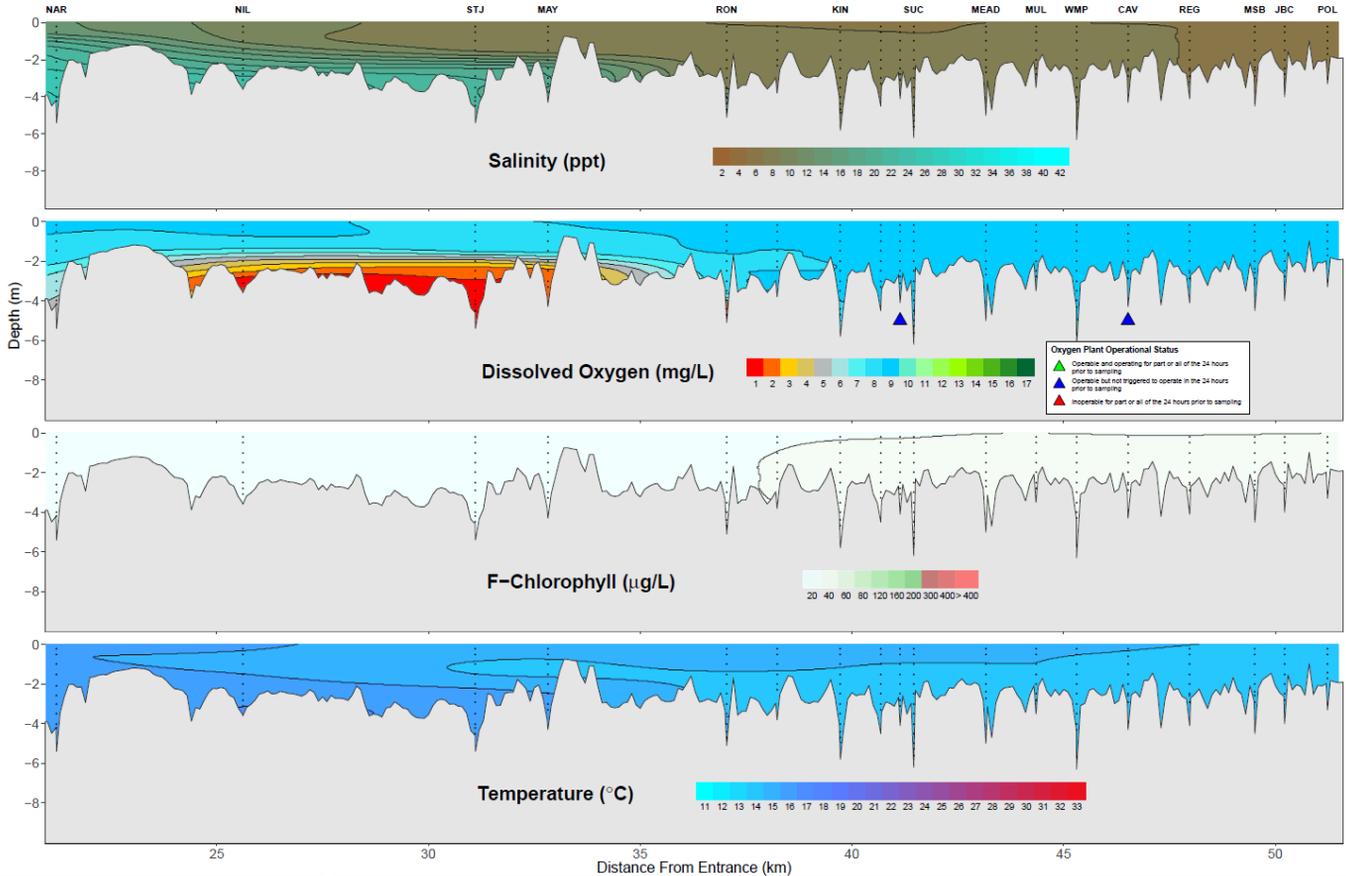
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### Swan River Estuary – Physical-Chemical Profile – 22nd Jul 2019



### Middle and Upper Swan River Estuary – Physical-Chemical Profile – 22nd Jul 2019



*Date:* 22 July 2019

*Weather & tide conditions:* Conditions were overcast with up to 100% cloud cover and a predominantly south to south-westerly breeze of up to 6 knots. The predicted tides at Guildford were 1.03 m (high tide) at 13:21 and 0.77 m (low tide) at 22:08. Perth recorded 28.6 mm 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 (FP1 to NAR):* The Lower Swan Estuary was saline from FP1 to BLA and brackish over saline from ARM to NAR. Water was oxygenated to well oxygenated throughout all sites, with the exception of low oxygen bottom water at HEA. Chlorophyll fluorescence was low, indicating low microalgae activity. Water temperature ranged from 15.0 to 16.8°C.

*Middle Swan Estuary (NIL to RON):* The Middle Swan Estuary was brackish throughout. Surface water was well oxygenated throughout however bottom water was hypoxic throughout. Chlorophyll fluorescence was low throughout, indicating low microalgae activity. Water temperature ranged from 13.8 to 16.0°C.

*Upper Swan Estuary (BWR10 to POL):* The Upper Swan Estuary was brackish throughout. Water was well oxygenated throughout. Chlorophyll fluorescence was highest in this zone, indicating high microalgae activity. Water temperature ranged from 13.7 to 15.2°C.

#### **Recommended reference**

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Swan Estuary 22 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.