



# Swan Canning Estuary Water Quality Monitoring Project

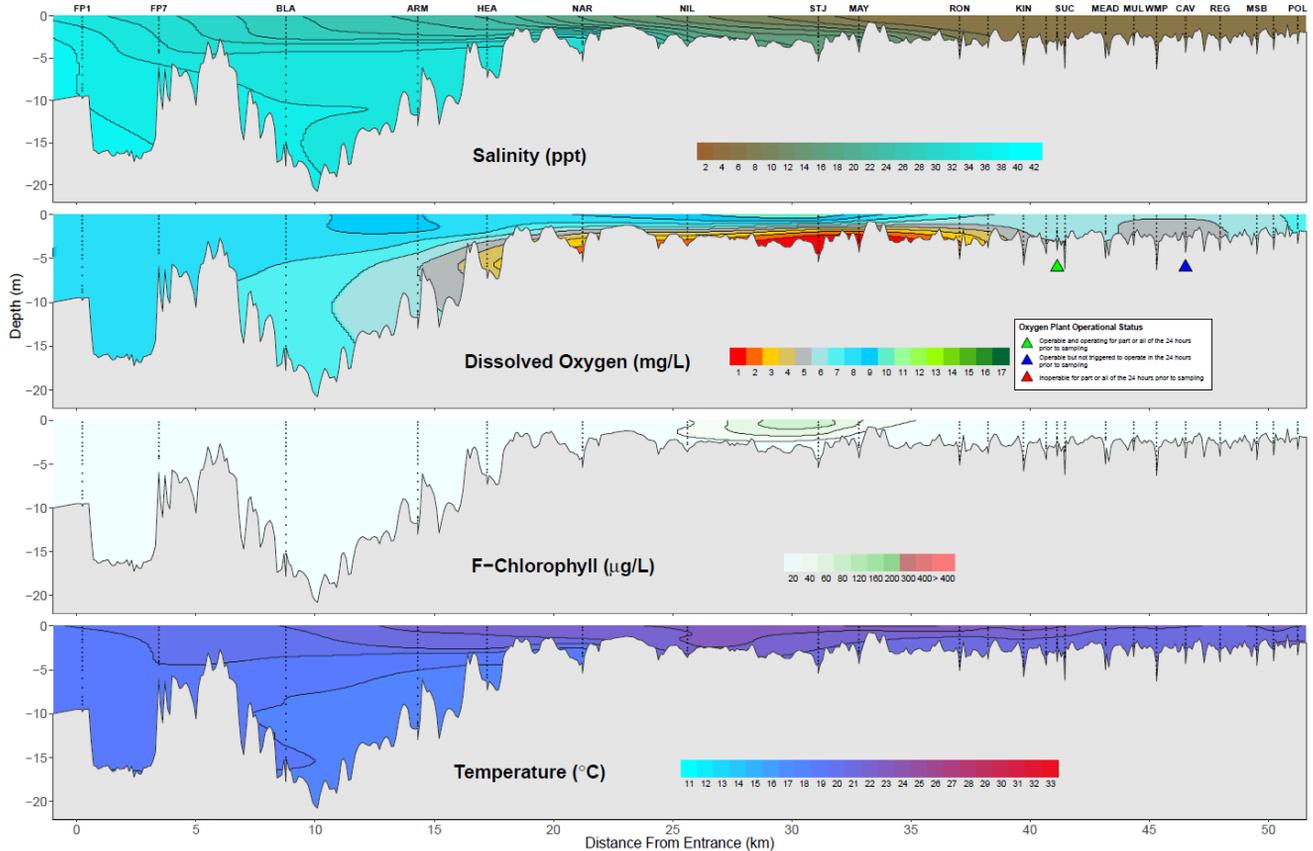
**Weekly Profile Report for the  
Lower to Upper Swan Estuary**

**1<sup>st</sup> October 2019**

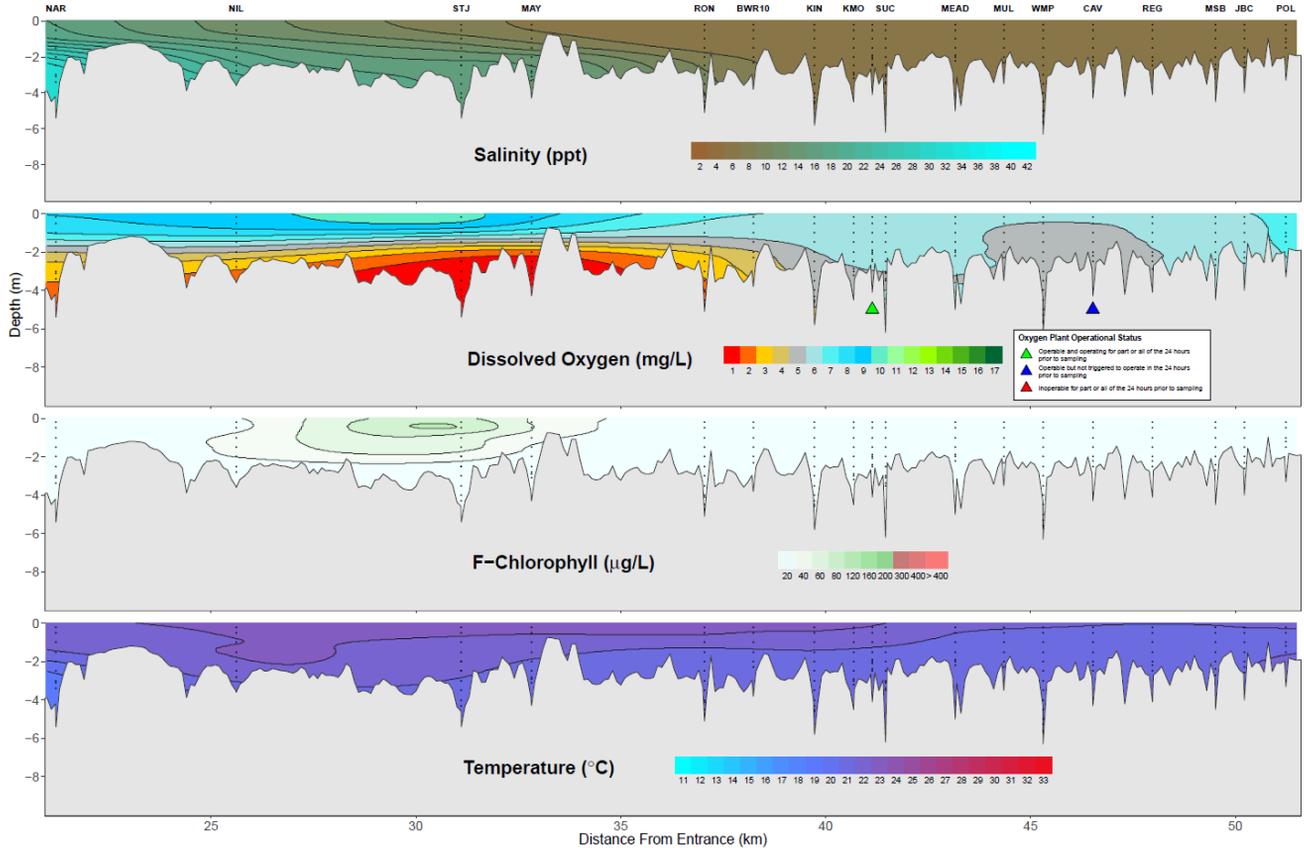
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### Swan River Estuary – Physical-Chemical Profile – 1st Oct 2019



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



Date: 1st October 2019

Weather & tide conditions: Conditions were overcast with up to 65% cloud cover and a shifting breeze of up to 5 knots. The predicted tides at Barrack St were 0.62 m (low tide) at 8:31 am and 0.71 m (high tide) at 1:58 pm. Perth recorded 1.8 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was triggered to provide oxygen and the Caversham oxygenation plant was operational but not triggered to provide oxygen the week prior to sampling.

Lower Swan-Canning Estuary (FP1 to NAR): The Lower Swan-Canning Estuary was saline from FP1 to BLA and brackish over saline from ARM to NAR. Surface waters in this zone were well oxygenated with bottom waters being low in oxygen at HEA and NAR. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.2 to 18.2 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish at NIL and STJ and fresh over brackish at MAY and RON. Surface waters were well oxygenated throughout the zone with bottom waters being low in oxygen at NIL and hypoxic at STJ, MAY and RON. Chlorophyll fluorescence was highest at STJ indicating higher microalgal activity in that area. Water temperature ranged from 20.3 to 23.0 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was fresh over brackish at BWR10 and fresh from KIN to POL. Surface waters were oxygenated throughout the zone with bottom waters being low in oxygen at BWR10. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 20.4 to 22.5 °C.

#### **Recommended reference**

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Lower to Upper Swan Estuary 1st October 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.