



Department of Biodiversity,  
Conservation and Attractions



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# Swan Canning Estuary Water Quality Monitoring Project

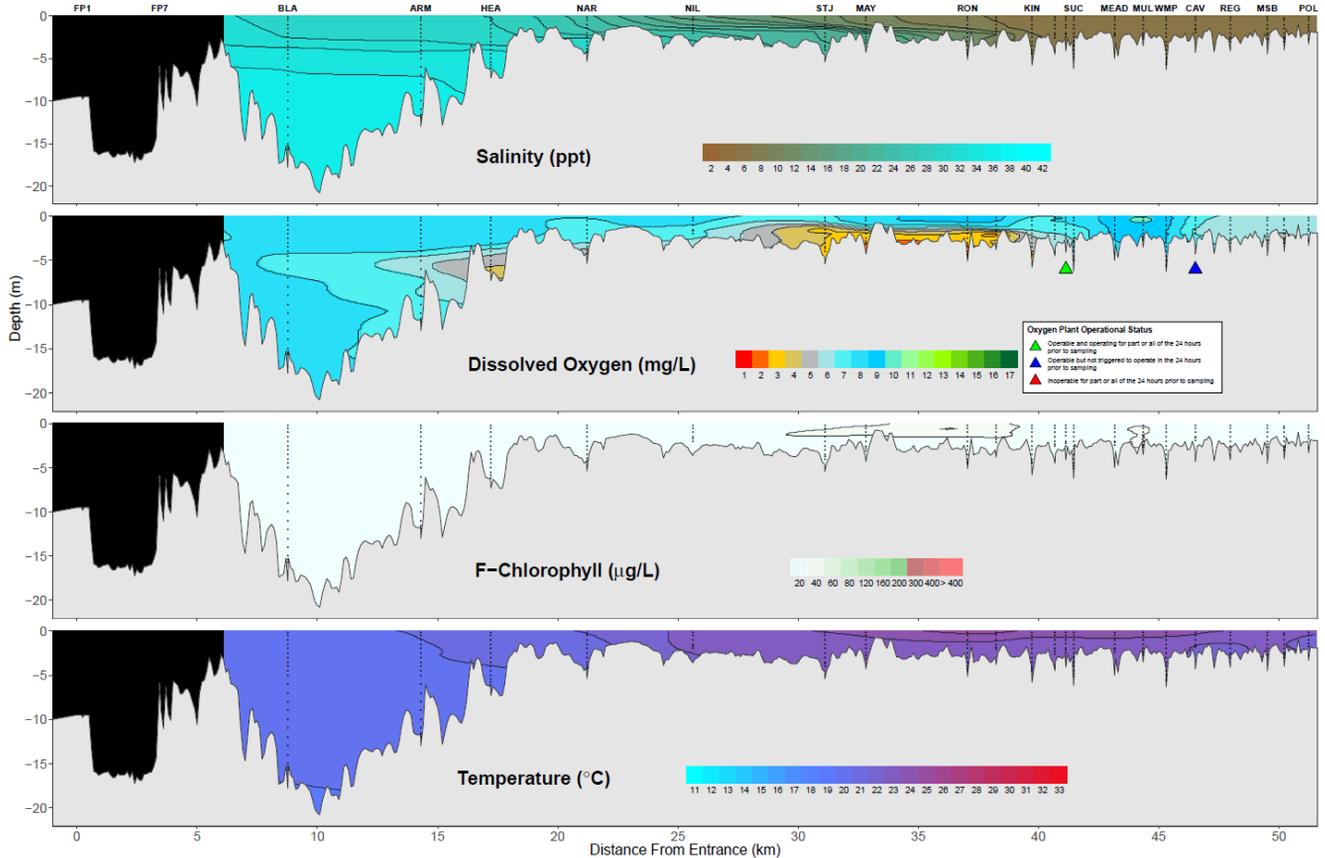
**Weekly Profile Report for the  
Lower to Upper Swan Estuary**

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

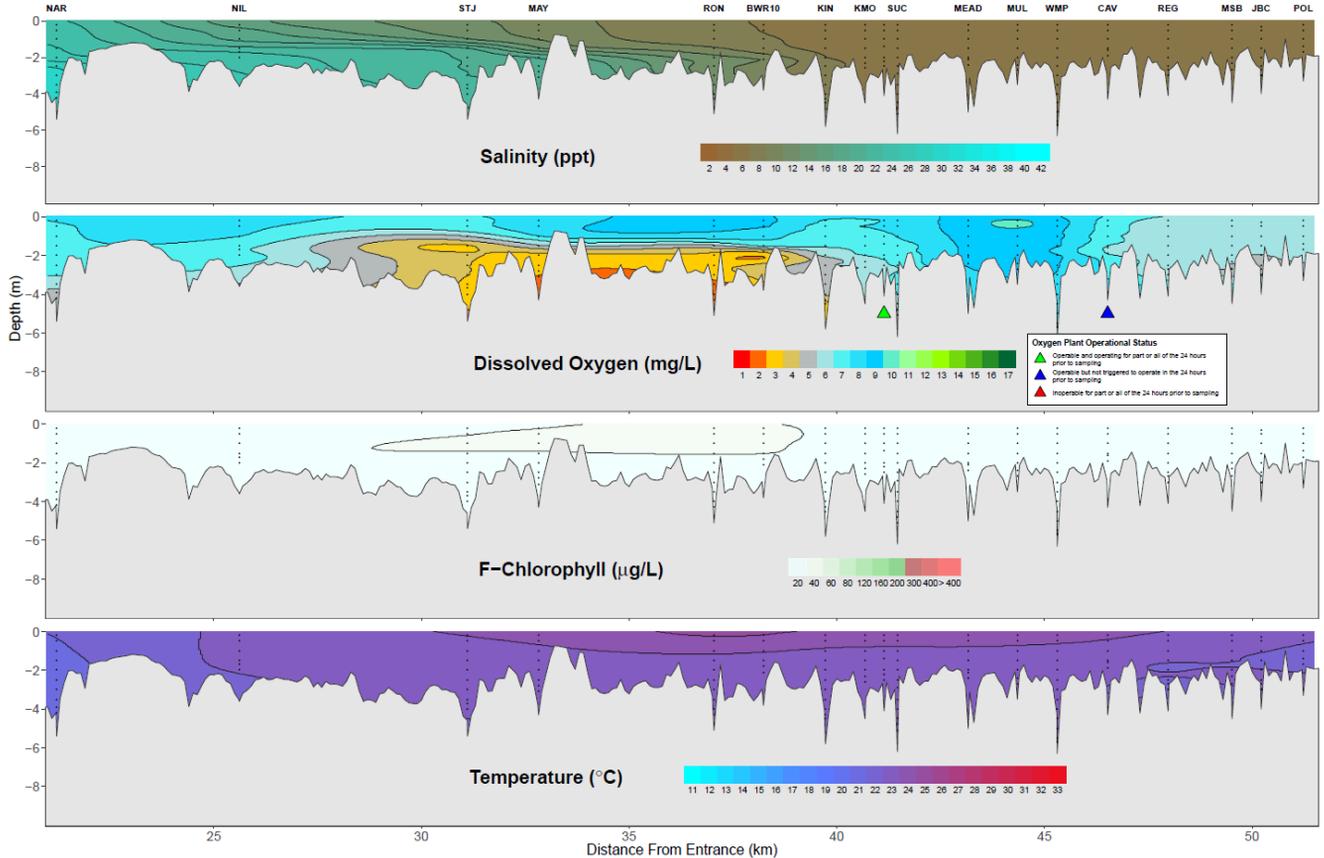
**Prepared by**

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### Swan River Estuary – Physical-Chemical Profile – 21st Oct 2019



### Middle and Upper Swan River Estuary – Physical-Chemical Profile – 21st Oct 2019



Date: 21st October 2019

Weather & tide conditions: Conditions were overcast with up to 70% cloud cover and a shifting breeze of up to 3 knots. The predicted tides at Barrack St were 0.52 m (low tide) at 2:44 pm and 0.93 m (high tide) at 3:49 am. Perth recorded no 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 in the 24 hours prior to sampling.

Lower Swan-Canning Estuary (BLA to NAR): The Lower Swan-Canning Estuary was saline from BLA to HEA and brackish over saline at NAR. Surface waters in this zone were well oxygenated with bottom waters being low in oxygen at HEA. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 19.0 to 21.0 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from NIL to RON. Surface waters were well oxygenated throughout this zone with bottom waters being low in oxygen at STJ and hypoxic at MAY and RON. Chlorophyll fluorescence was high at STJ, MAY and RON indicating higher microalgal activity in these areas. Water temperature ranged from 22.2 to 24.2 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was fresh over brackish at BWR10 and KIN and fresh between KMO and POL. Surface waters were oxygenated throughout the zone with bottom waters being low in oxygen at KIN and hypoxic at BWR10. Chlorophyll fluorescence was high at BWR10 indicating higher microalgal activity in this area. Water temperature ranged from 21.8 to 24.0 °C.

**NB:** Profile plots are visual interpolations of measured parameters only. Detailed data are available at [wir.water.wa.gov.au](http://wir.water.wa.gov.au).

#### **Recommended reference**

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Lower to Upper Swan Estuary 21st 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.