



Swan Canning Estuary Water Quality Monitoring Project

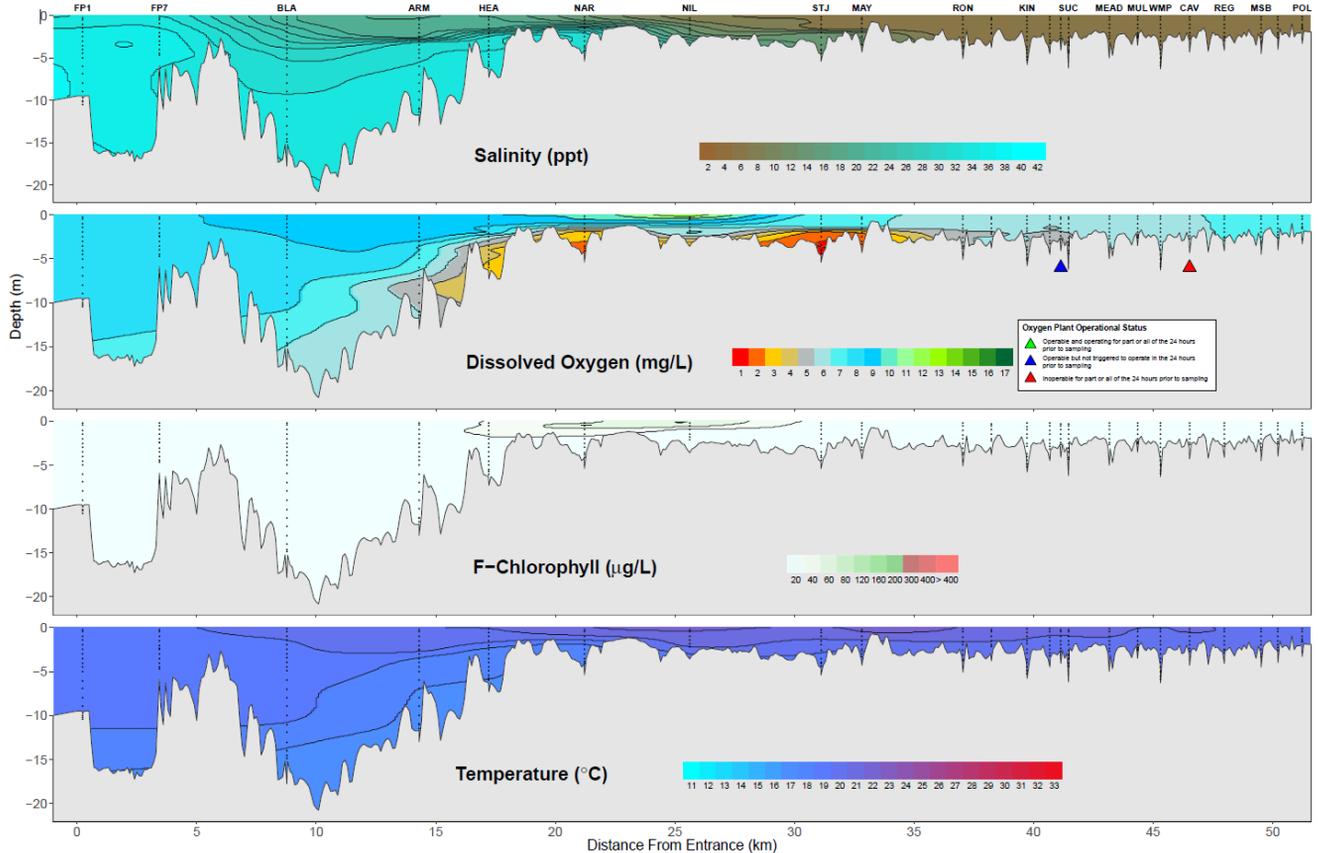
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

16th September 2019

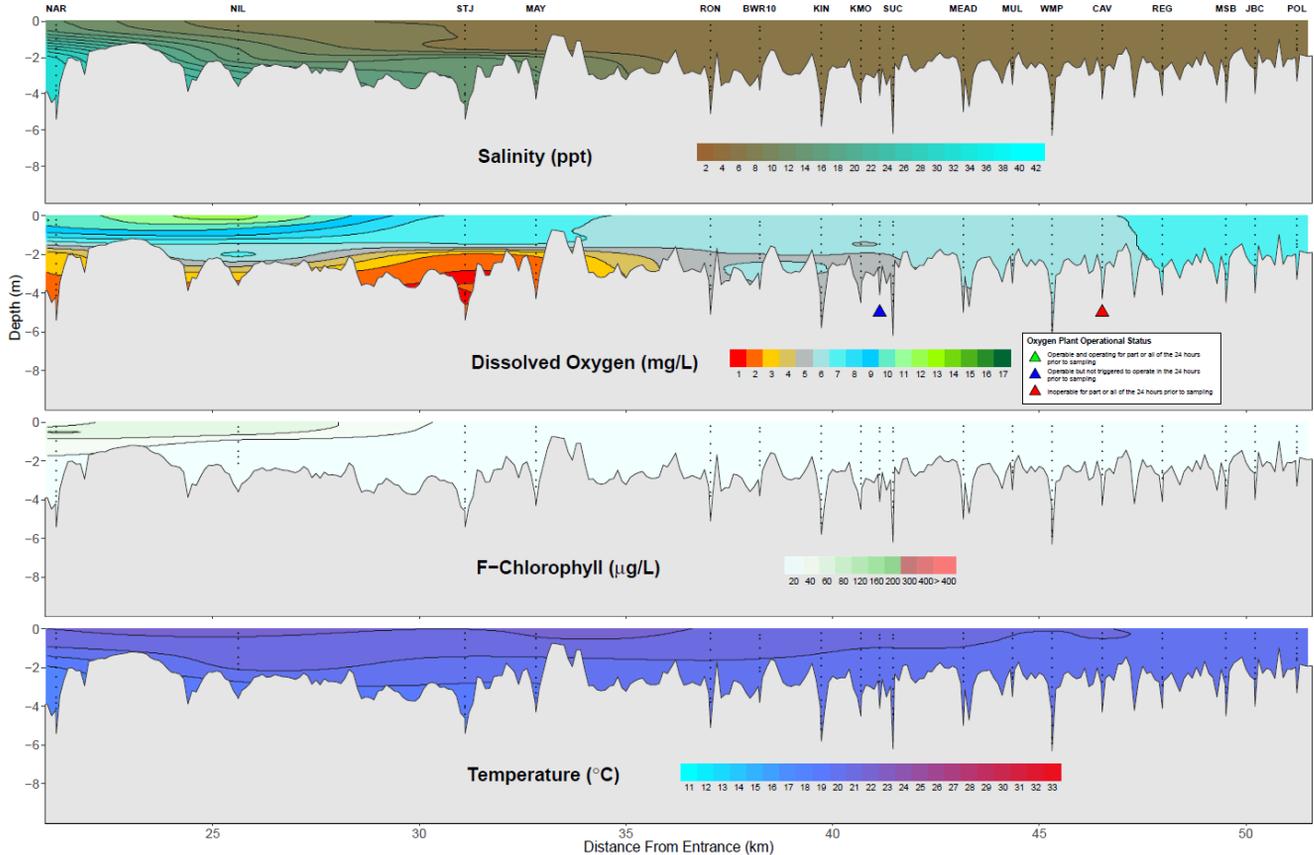
Prepared by

**River and Estuaries Science Program,
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions**

Swan River Estuary – Physical-Chemical Profile – 16th Sep 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 16th Sep 2019



Date: 16 September 2019

Weather & tide conditions: Conditions were overcast with up to 60% cloud cover and a shifting breeze of up to 6.5 knots. The predicted tides at Barrack St were 0.86 m (high tide) at 12:07 pm and 0.70 m (low tide) at 6:19 pm. Perth recorded no rainfall during the week prior to sampling (Bureau of Meteorology).

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

Lower Swan-Canning Estuary (FP1 to NAR): The Lower Swan-Canning Estuary was saline from FP1 to FP7 and brackish over saline from BLA to NAR. Surface waters in this zone were well oxygenated, with bottom waters being low in oxygen at HEA and hypoxic at NAR. Chlorophyll fluorescence was high at NAR indicating higher microalgal activity in that area. Water temperature ranged from 16.7 to 20.8 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish at NIL, fresh over brackish at STJ and MAY and fresh at RON. Surface waters were well oxygenated throughout the zone with bottom waters being hypoxic at STJ and MAY. Chlorophyll fluorescence was highest at NIL indicating higher microalgal activity in that area. Water temperature ranged from 18.9 to 21.4 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was fresh from BWR10 to POL. Waters were oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 19.3 to 21.1 °C.

Recommended reference

Department of Biodiversity, Conservation and Attractions 2019. *Swan Canning estuary water quality monitoring weekly profile report, Lower to Upper Swan Estuary 16 September 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.