



Swan Canning Estuary Water Quality Monitoring Project

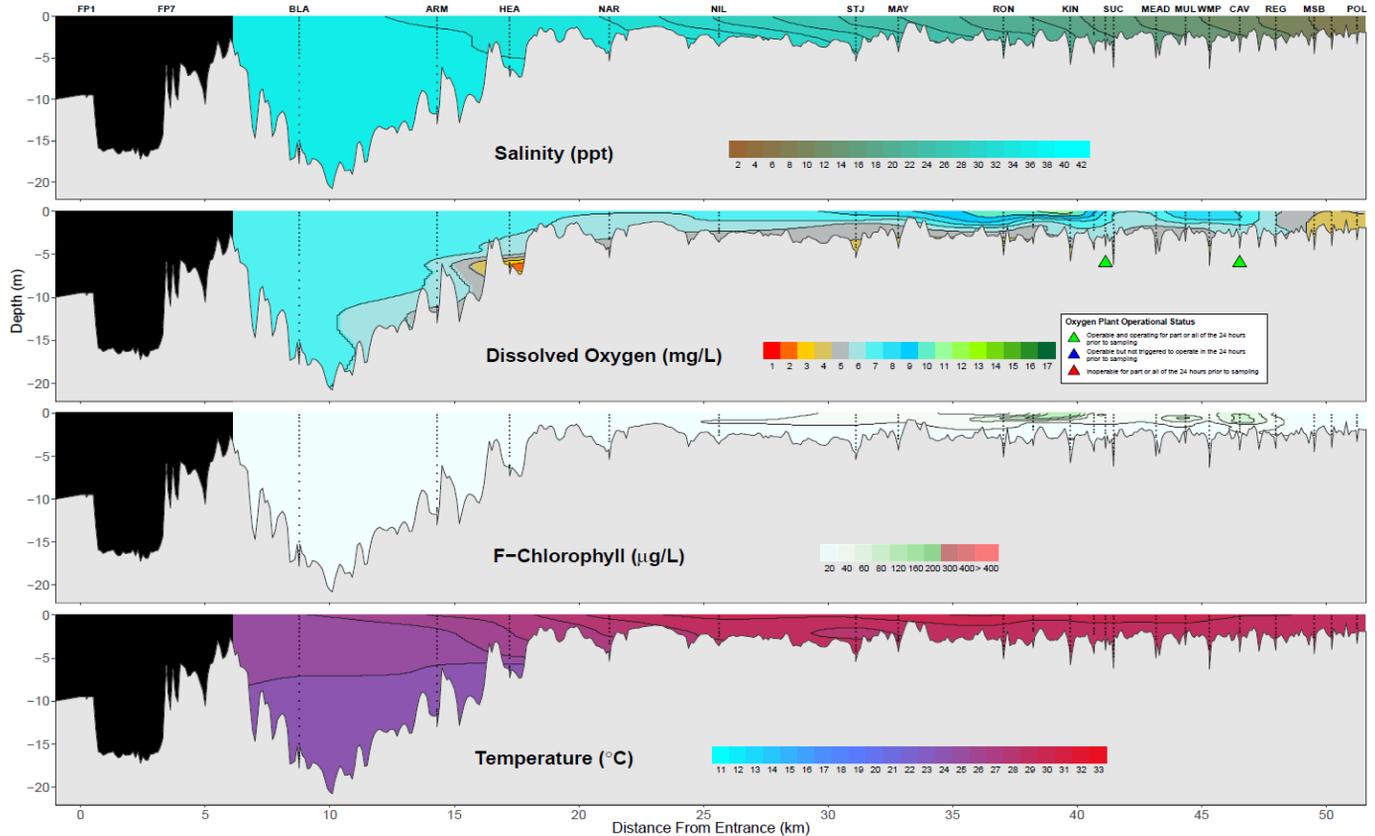
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

16th December 2019

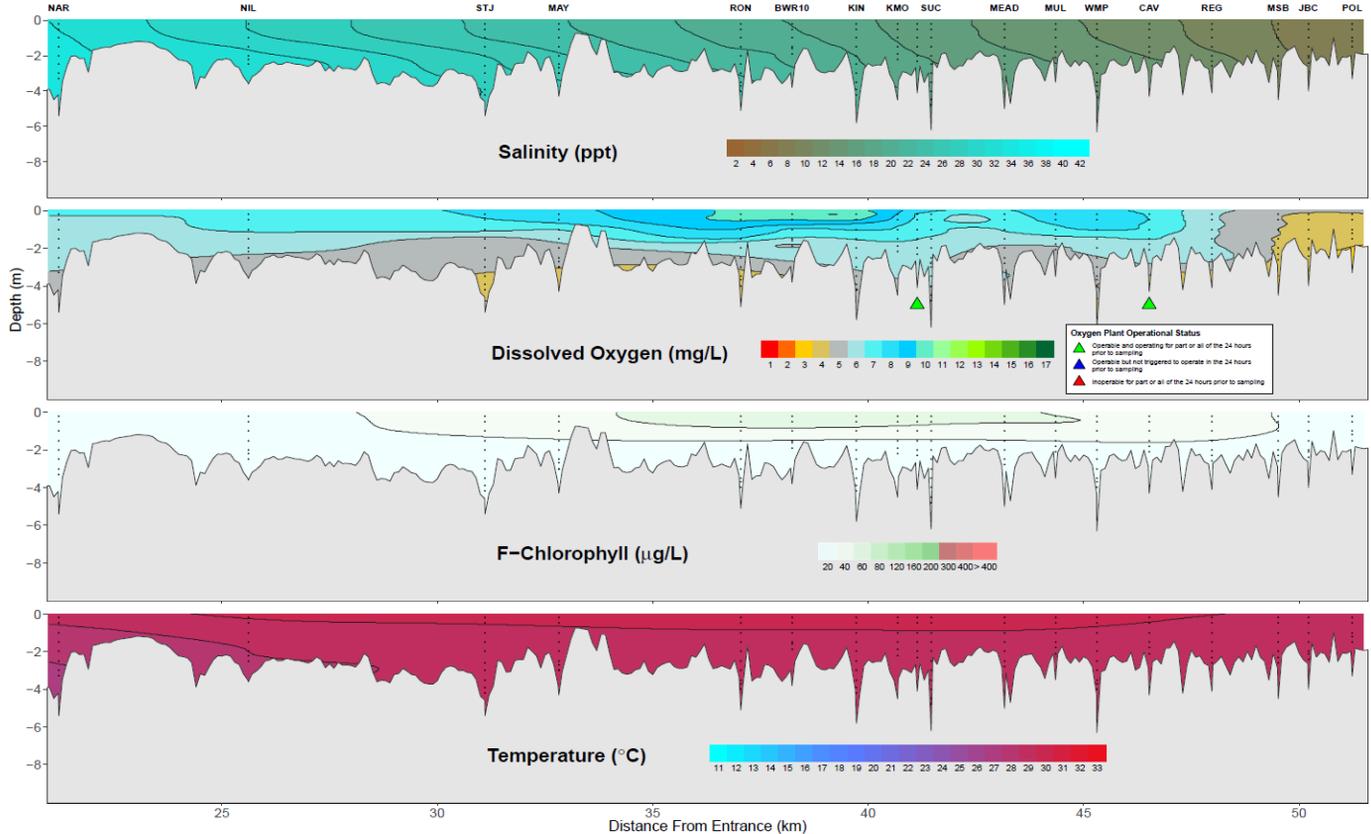
Prepared by

**Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions**

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



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



Date: 16th December 2019

Weather & tide conditions: Conditions were clear with a predominantly westerly breeze of up to 7.5 knots. The predicted tides at Barrack St were 1.05 m at 12:43 am (high tide overnight) and 0.48 m at 11:27 am (low tide). Perth recorded no rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were operational and 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 NAR. Surface and bottom waters were oxygenated or well oxygenated throughout this zone except at HEA which was low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 23.2 to 28.5 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL, brackish over saline from STJ to MAY and brackish at RON. Surface waters were well oxygenated throughout this zone. Bottom waters were oxygenated at NIL and MAY and low in oxygen at STJ and RON. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in this area. Water temperature ranged from 27.7 to 29.9 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish throughout. Surface waters were oxygenated or well oxygenated except at JBC which was low in oxygen. Bottom waters were oxygenated except between MSB and POL where they were low in oxygen. Chlorophyll fluorescence was highest at KIN indicating higher microalgal activity in this area. Water temperature ranged from 28.1 to 30.4 °C.

NB: Profile plots are visual interpolations of measured parameters only. Detailed data are available at 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 16th December 2019*. Rivers and Estuaries Science (<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.