



Swan Canning Estuary Water Quality Monitoring Project

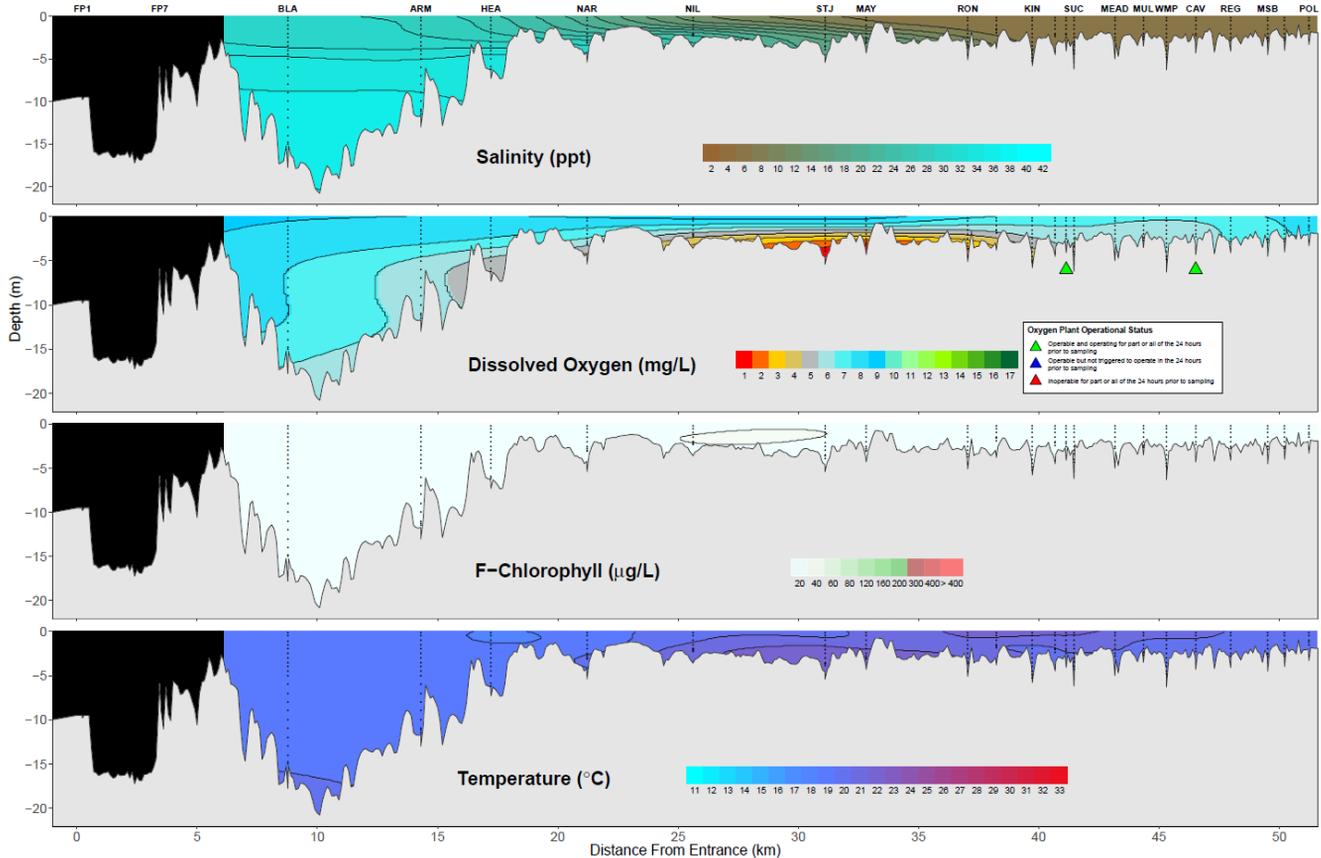
**Weekly Profile Report for the
Lower to Upper Swan Estuary**

7th October 2019

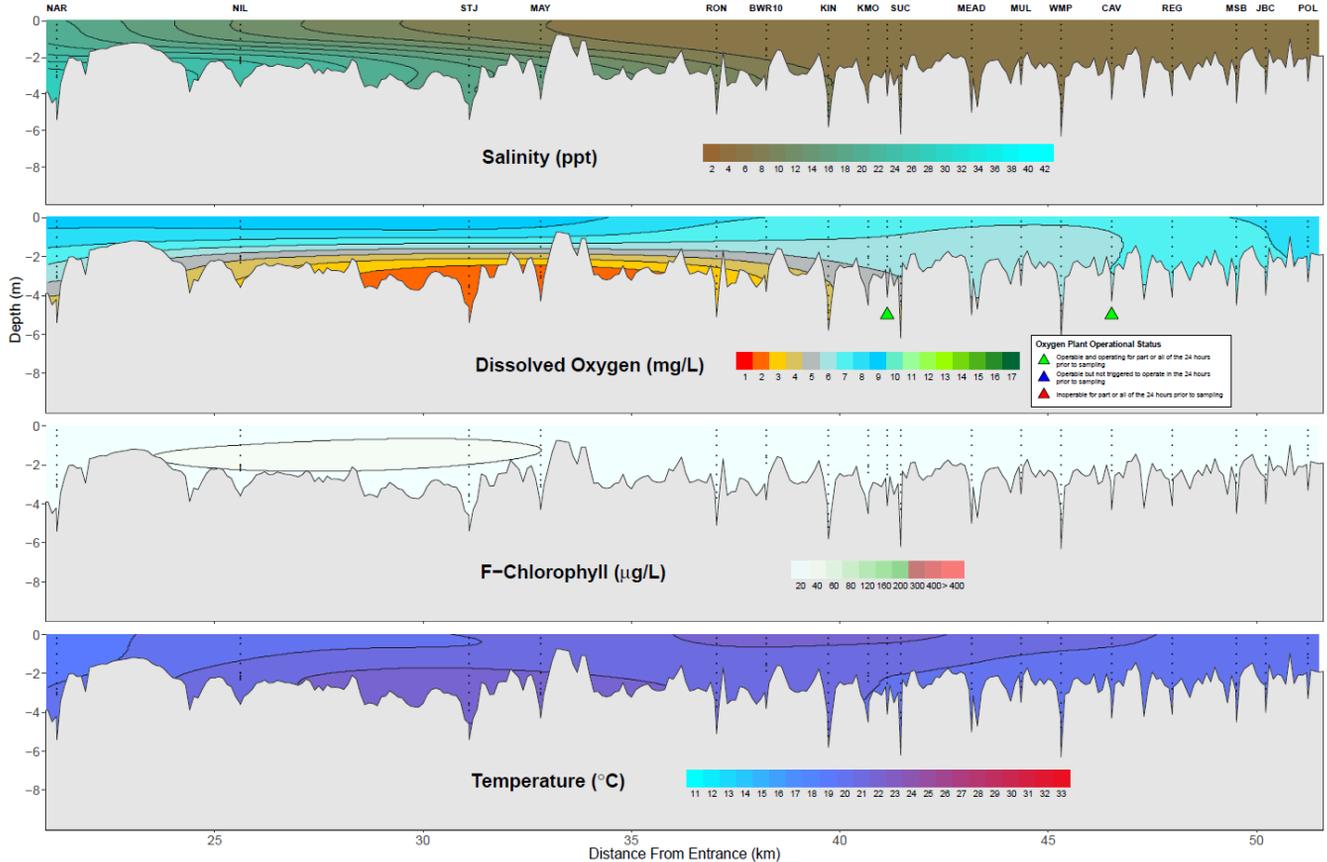
Prepared by

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

Swan River Estuary – Physical-Chemical Profile – 7th Oct 2019



Middle and Upper Swan River Estuary – Physical-Chemical Profile – 7th Oct 2019



Date: 7th October 2019

Weather & tide conditions: Conditions were clear with no cloud cover and a shifting breeze of up to 10 knots. The predicted tides at Barrack St were 0.89 m (high tide) at 3:36 am and 0.56 m (low tide) at 4:14 pm. Perth recorded 2.8 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were triggered to provide oxygen in the 24 hours prior to sampling.

Lower Swan-Canning Estuary (FPI 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 17.9 to 19.1 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from NIL to MAY and fresh over brackish at RON. Surface waters were well oxygenated throughout this zone with bottom waters being low in oxygen at NIL and hypoxic at STJ, MAY and RON. Chlorophyll fluorescence was highest at NIL and STJ indicating higher microalgal activity in this area. Water temperature ranged from 19.7 to 21.5 °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 well oxygenated from BWR10 to CAV and oxygenated from REG to POL with bottom waters being low in oxygen at KIN. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 19.0 to 22.0 °C.

NB: Profile plots are visual interpolations of measured parameters only. Detailed data are available at www.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 7th 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.