

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

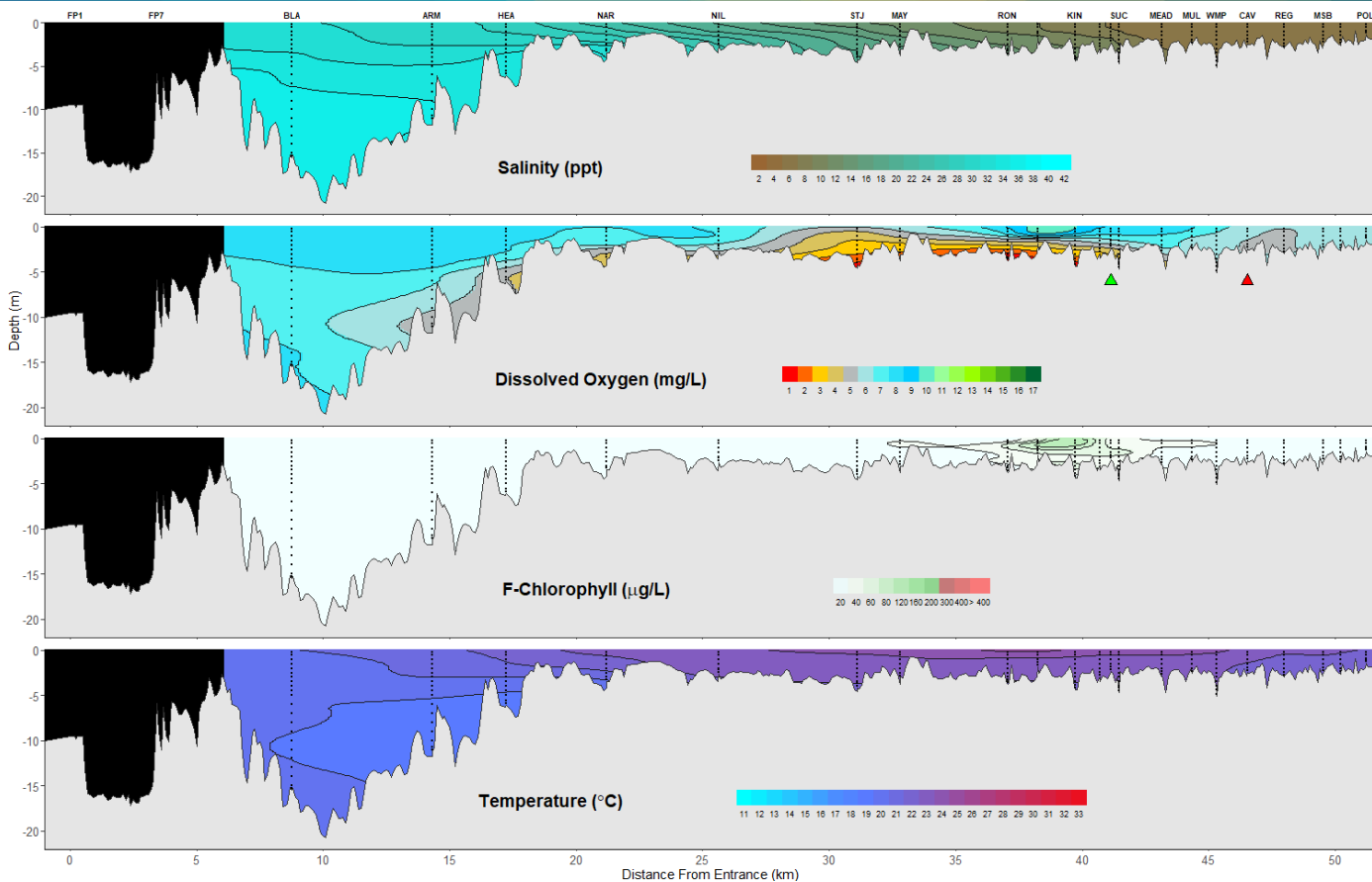
Lower Swan Canning Estuary to Upper Swan Estuary

19th October 2020

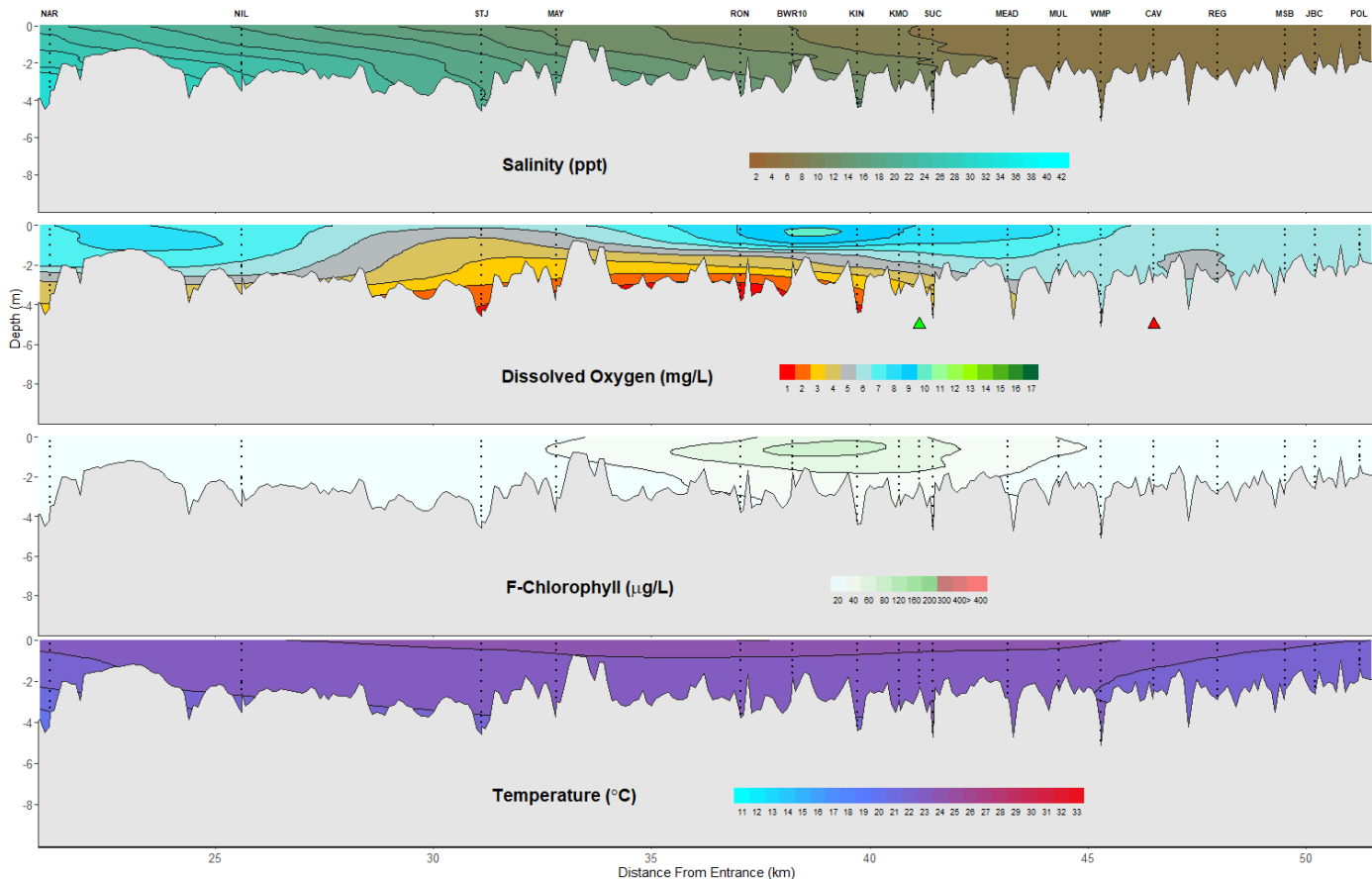
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Swan Canning Estuary- Water Quality Profiles- 19th October 2020



Middle and Upper Swan Estuary - Water Quality Profiles - 19th October 2020



Date: 19th October 2020

Weather & tide conditions: Conditions were clear with a predominantly south westerly breeze of up to 8 knots. The predicted tides at Barrack St were 0.47 m at 7:33 am (low tide), 0.65 m at 1:25 pm (high tide) and 0.65 m at 2:12 pm (second high tide). 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 not operational during 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. Waters were oxygenated or well oxygenated, except at NAR where bottom waters were low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 18.2 to 22.6 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from NIL to RON. Surface waters were oxygenated or well oxygenated and bottom waters were hypoxic between STJ and RON. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in that area. Water temperature ranged from 22.0 to 24.1 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish from BWR10 to POL. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at BWR10 and KMO and hypoxic at KIN and SUC. Chlorophyll fluorescence was highest at KIN indicating higher microalgal activity in that area. Water temperature ranged from 20.7 to 23.9 °C.

NB: Profile plots are visual interpolations of measured parameters only. Detailed data are available at wir.water.wa.gov.au.

Oxygenation Plant Operational Status:

- ▲ Operating for part or all of the 24 hours prior to sampling
- ▲ Operable but not triggered to operate in the 24 hours prior to sampling
- ▲ Inoperable for part or all of the 24 hours prior to sampling

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

Recommended reference: Department of Biodiversity, Conservation and Attractions 2020. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 19th October 2020*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)