

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

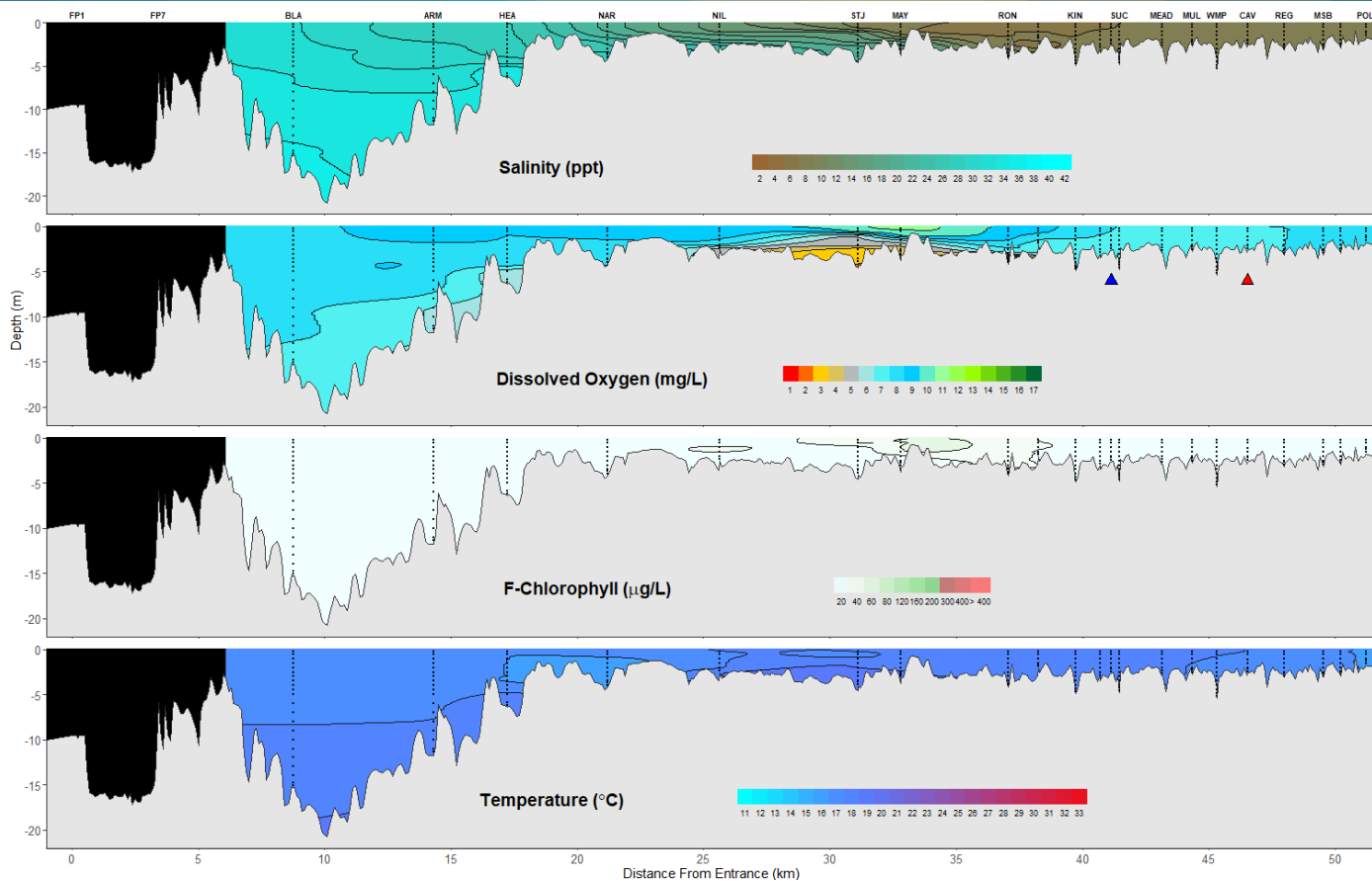
Lower Swan Canning Estuary to Upper Swan Estuary

21st September 2020

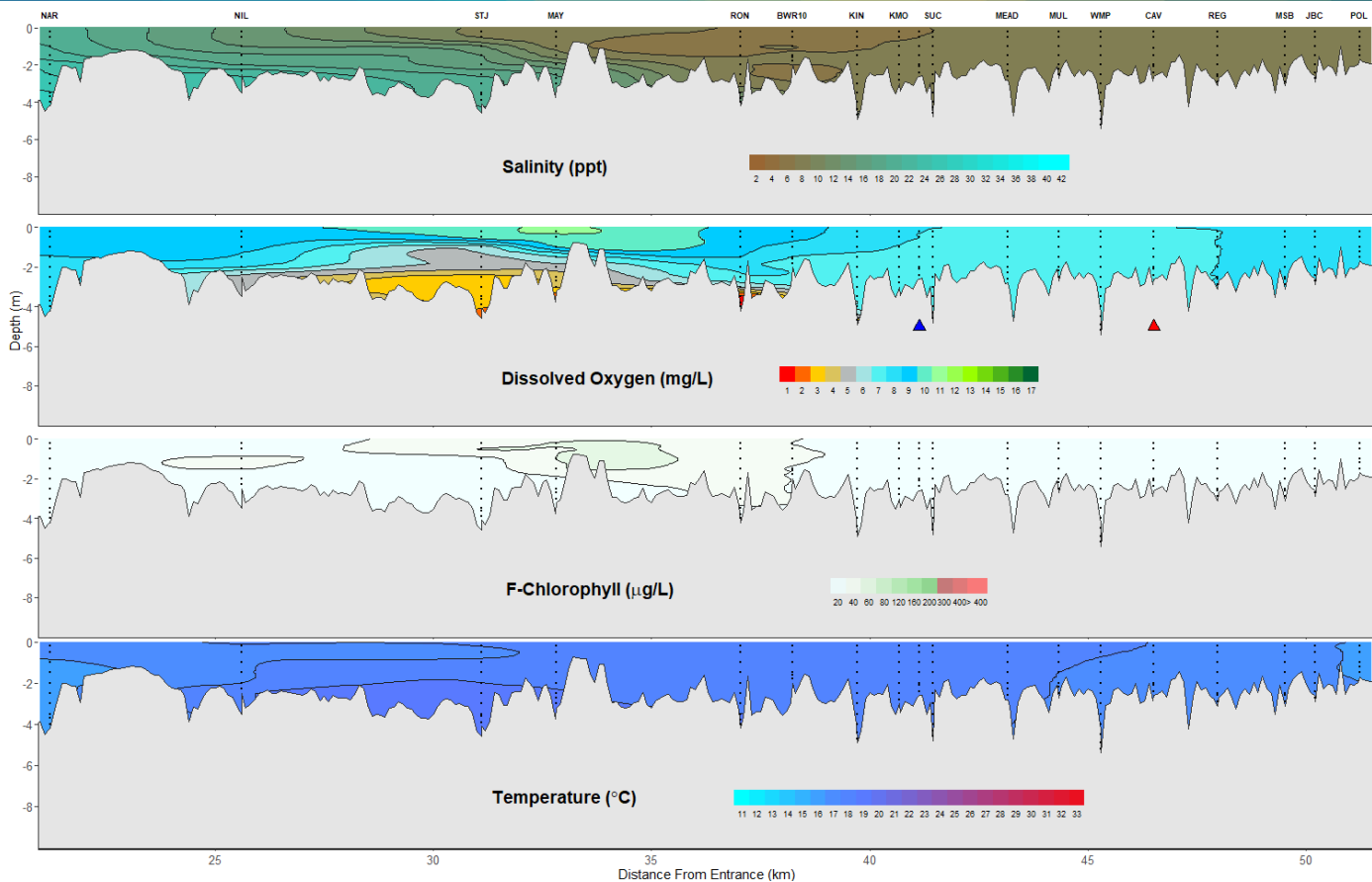
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Swan Canning Estuary- Water Quality Profiles- 21st September 2020



Middle and Upper Swan Estuary- Water Quality Profiles- 21st September 2020



Date: 21st September 2020

Weather & tide conditions: Conditions were cloudy with a variable breeze of up to 8 knots. The predicted tides at Barrack St were 0.92 m at 1:21 am (high tide), 0.63 m at 10:56 pm (low tide) and 0.66 m at 3:27 pm (high tide). Perth recorded 12.6 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was not 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 and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 15.4 to 17.8 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from NIL to RON. Surface waters were well oxygenated and bottom waters were low in oxygen from STJ to MAY, and anoxic at RON. Chlorophyll fluorescence was highest at MAY indicating higher microalgal activity in this area. Water temperature ranged from 16.6 to 18.8 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish at BWR10 to POL. Waters were well oxygenated except at KIN where bottom waters were hypoxic. Chlorophyll fluorescence was highest at BWR10 indicating higher microalgal activity in this area. Water temperature ranged from 15.8 to 18.1 °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 21st September 2020*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)