



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

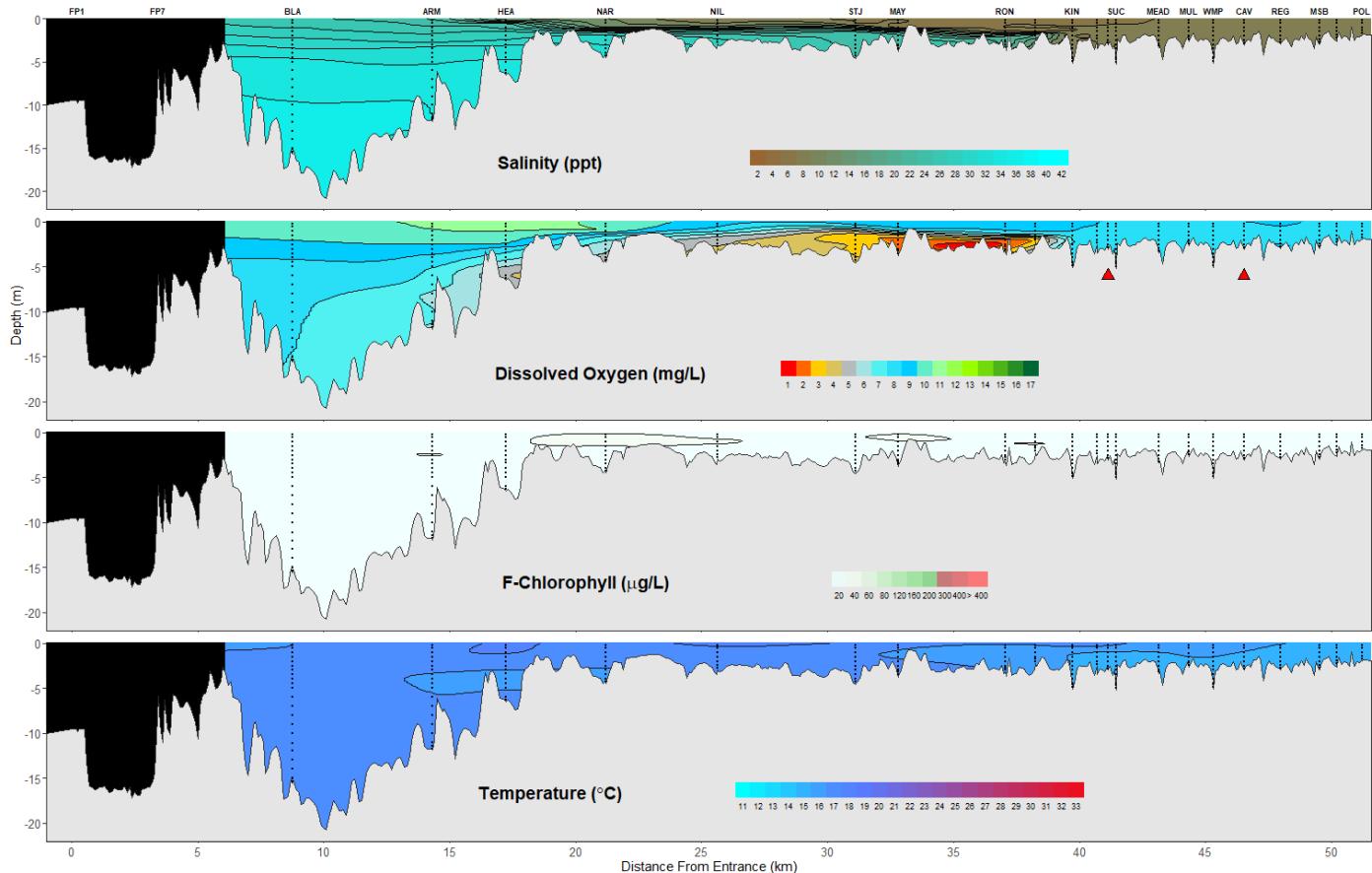
Lower Swan Canning Estuary to Upper Swan Estuary

24th August 2020

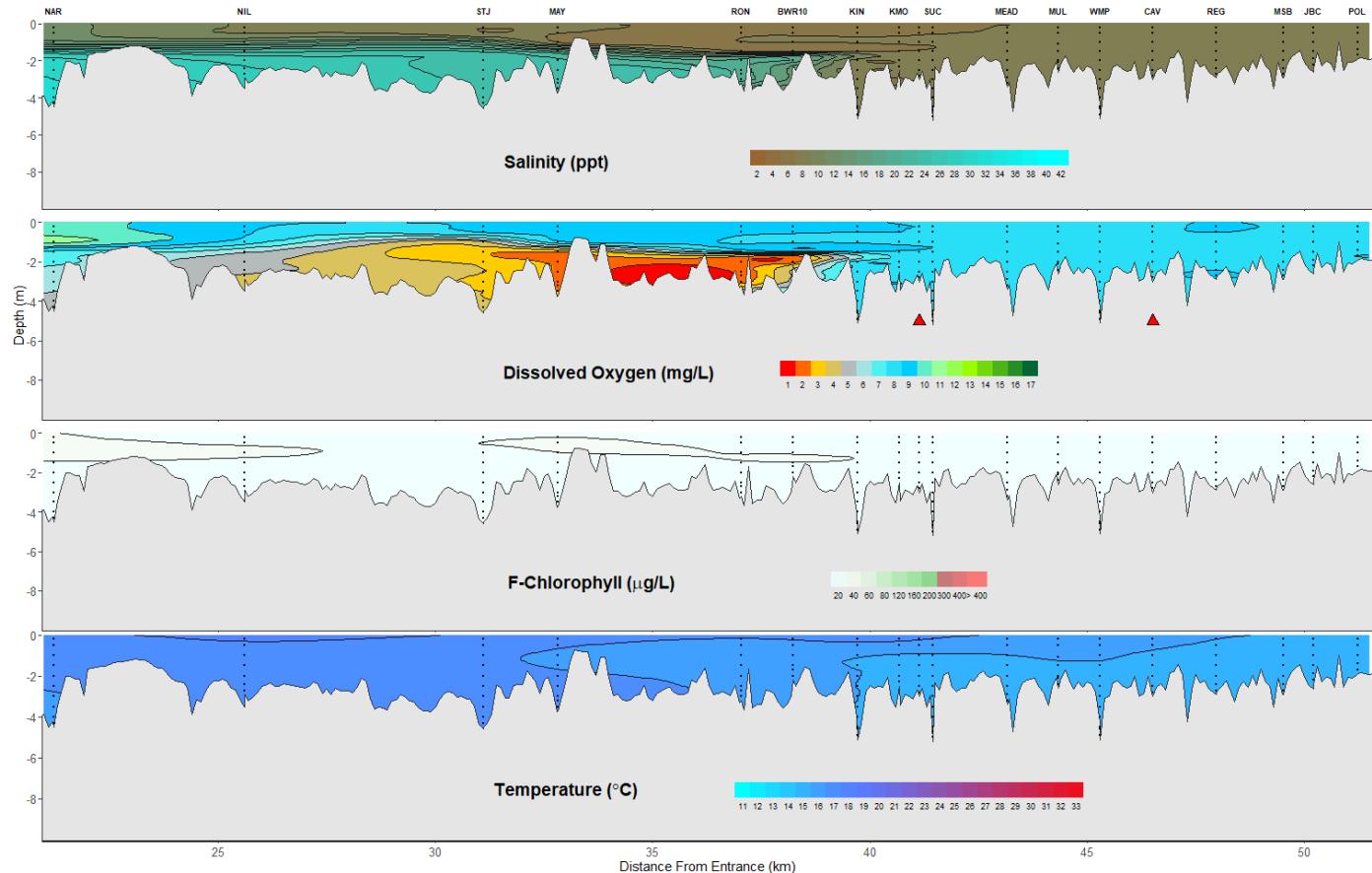
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Swan Canning Estuary- Water Quality Profiles- 24th August 2020



Middle and Upper Swan Estuary- Water Quality Profiles- 24th August 2020





Date: 24th August 2020

Weather & tide conditions: Conditions were overcast with a predominantly easterly breeze of up to 6 knots. The predicted tides at Barrack St were 0.9 m at 2:59 am (high tide) and 0.7 m at 6:23 pm (low tide). Perth recorded 3.8 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford and Caversham oxygenation plants were not operational during the 24 hours prior to sampling.

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was brackish over saline from BLA to NAR. Surface waters were well oxygenated and bottom waters were oxygenated or well oxygenated. Chlorophyll fluorescence was highest at NAR indicating higher microbial activity in this area. Water temperature ranged from 15.8 to 17.2 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline at NIL and brackish from STJ to RON. Surface waters were well oxygenated and bottom waters were low in oxygen at NIL and STJ and hypoxic from MAY to RON. Chlorophyll fluorescence was highest at NIL indicating higher microalgal activity in this area. Water temperature ranged from 15.4 to 17.1 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish from BWR10 to POL. Waters were oxygenated or well oxygenated except for bottom waters at BRW10 which were hypoxic. Chlorophyll fluorescence was highest at BWR10, indicating higher microalgal activity in this area. Water temperature ranged from 14.5 to 16.6 °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 24th August 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)