



Department of Biodiversity,
Conservation and Attractions



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Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

17th August 2020

Prepared by

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



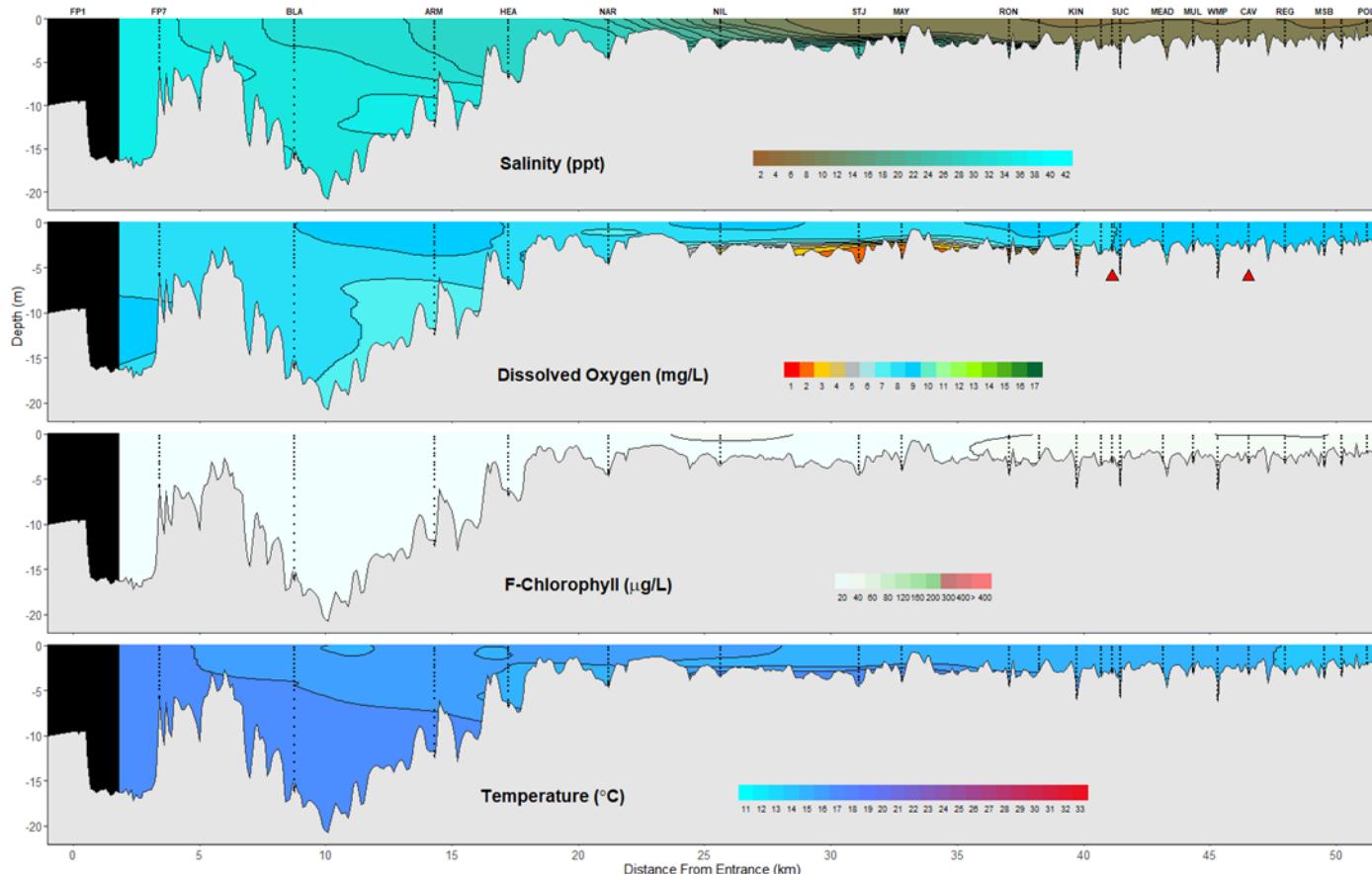
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Swan Canning Estuary- Water Quality Profiles- 17th August 2020





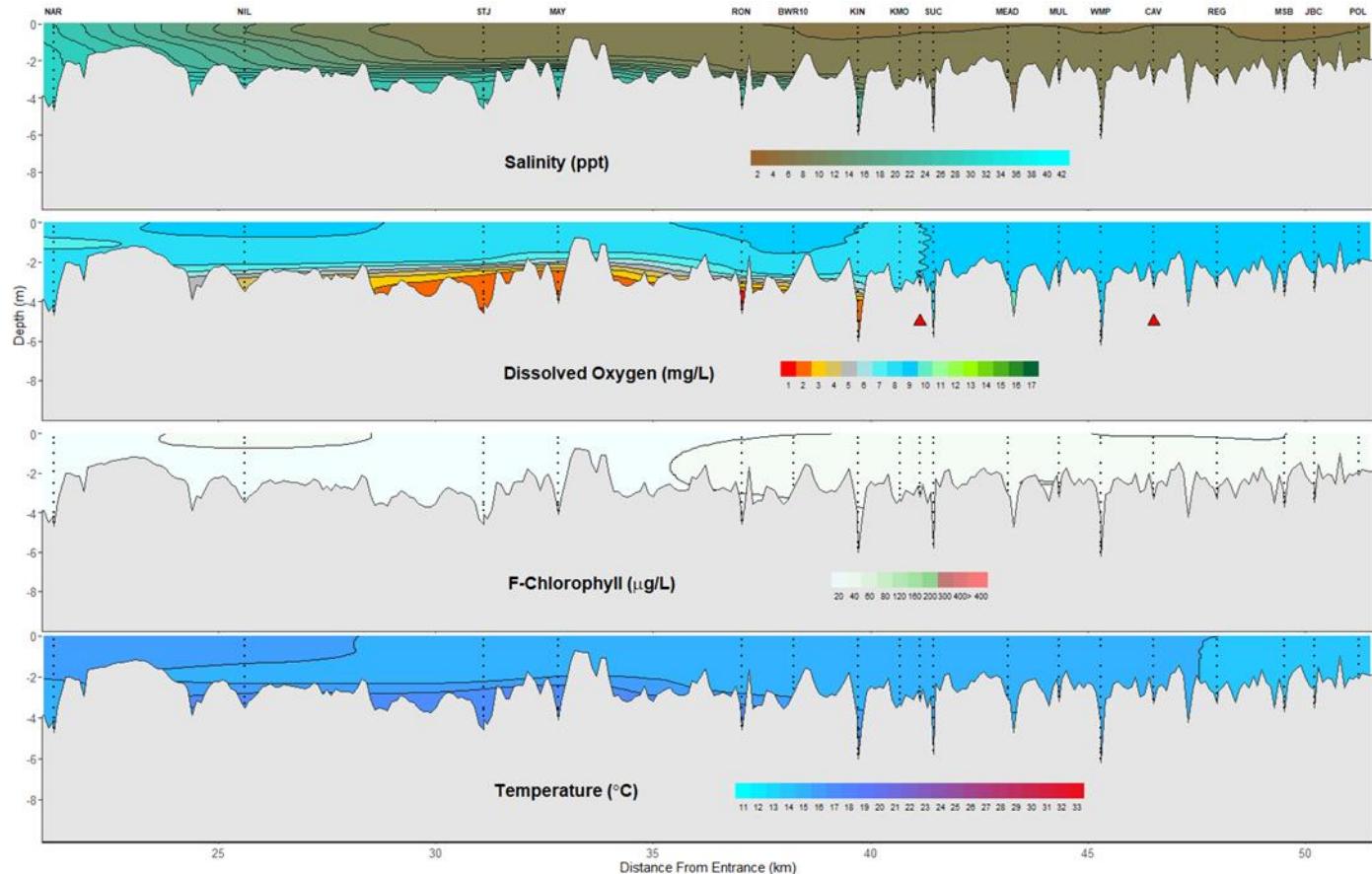
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Middle and Upper Swan Estuary- Water Quality Profiles- 17th August 2020





Date: 17th August 2020

Weather & tide conditions: Conditions were overcast with a predominantly south westerly breeze of up to 19 knots. The predicted tides at Barrack St were 1.15 m at 9:46 am (high tide) and 0.59 m at 8:08 pm (low tide). Perth recorded 35.8 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 (FP2.1 to NAR): The Lower Swan Canning Estuary was saline throughout. Waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 14.5 to 16.4 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline except at RON which was brackish. Surface waters were well oxygenated and bottom waters were low in oxygen at NIL and hypoxic from STJ to RON. Chlorophyll fluorescence was highest at NIL and RON, indicating higher microalgal activity in these areas. Water temperature ranged from 14.4 to 16.6 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish from BWR10 to POL except at JBC, SUC and KMO which were fresh over brackish. Waters were oxygenated or well oxygenated except for bottom waters at KIN which were hypoxic. Chlorophyll fluorescence was highest at MULB FARM, indicating higher microalgal activity in this area. Water temperature ranged from 13.6 to 16.2 °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 17th August 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)