



Department of Biodiversity,
Conservation and Attractions



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Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

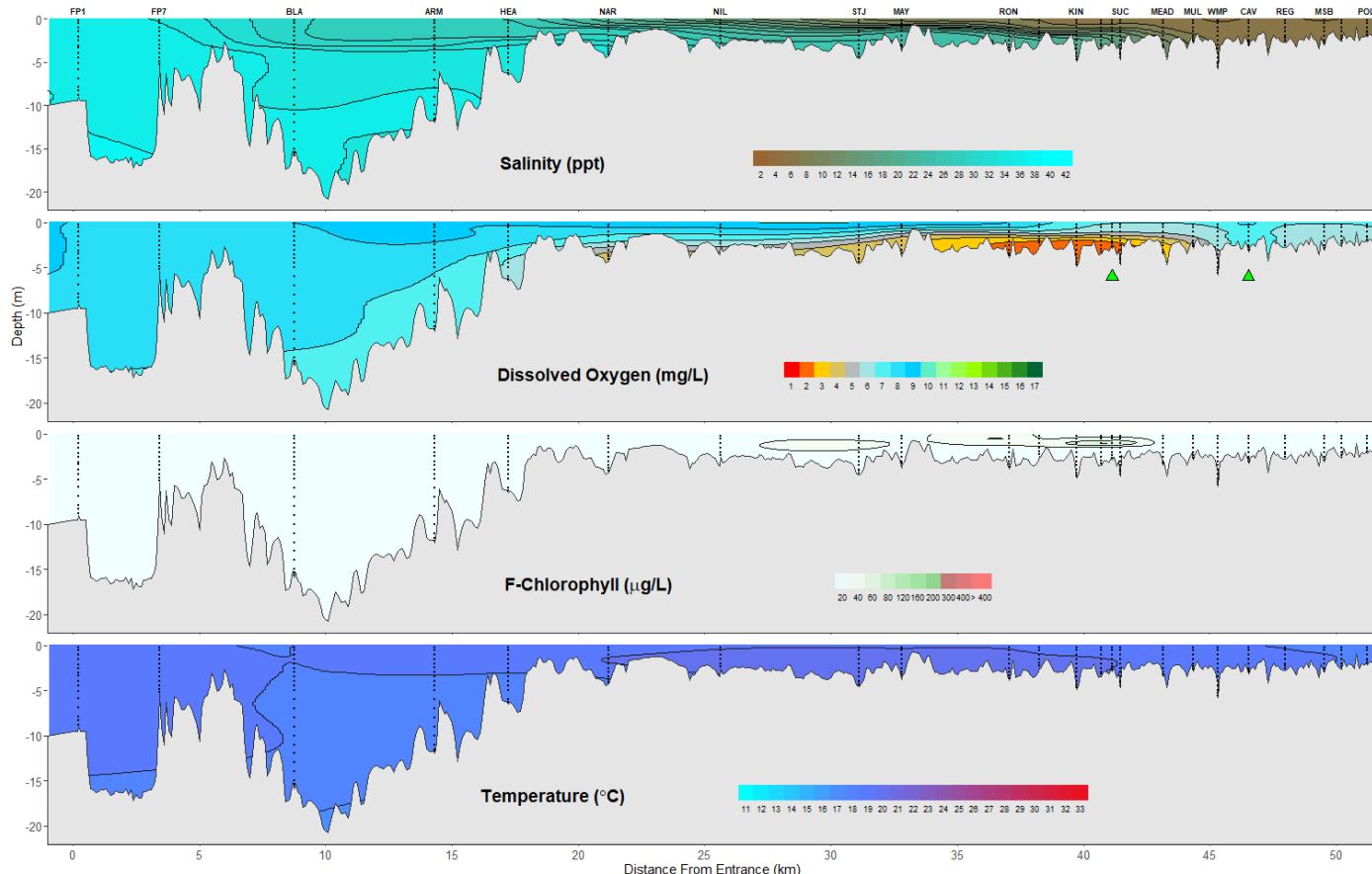
Lower Swan Canning Estuary to Upper Swan Estuary

29th September 2020

Prepared by

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

Swan Canning Estuary- Water Quality Profiles- 29th September 2020





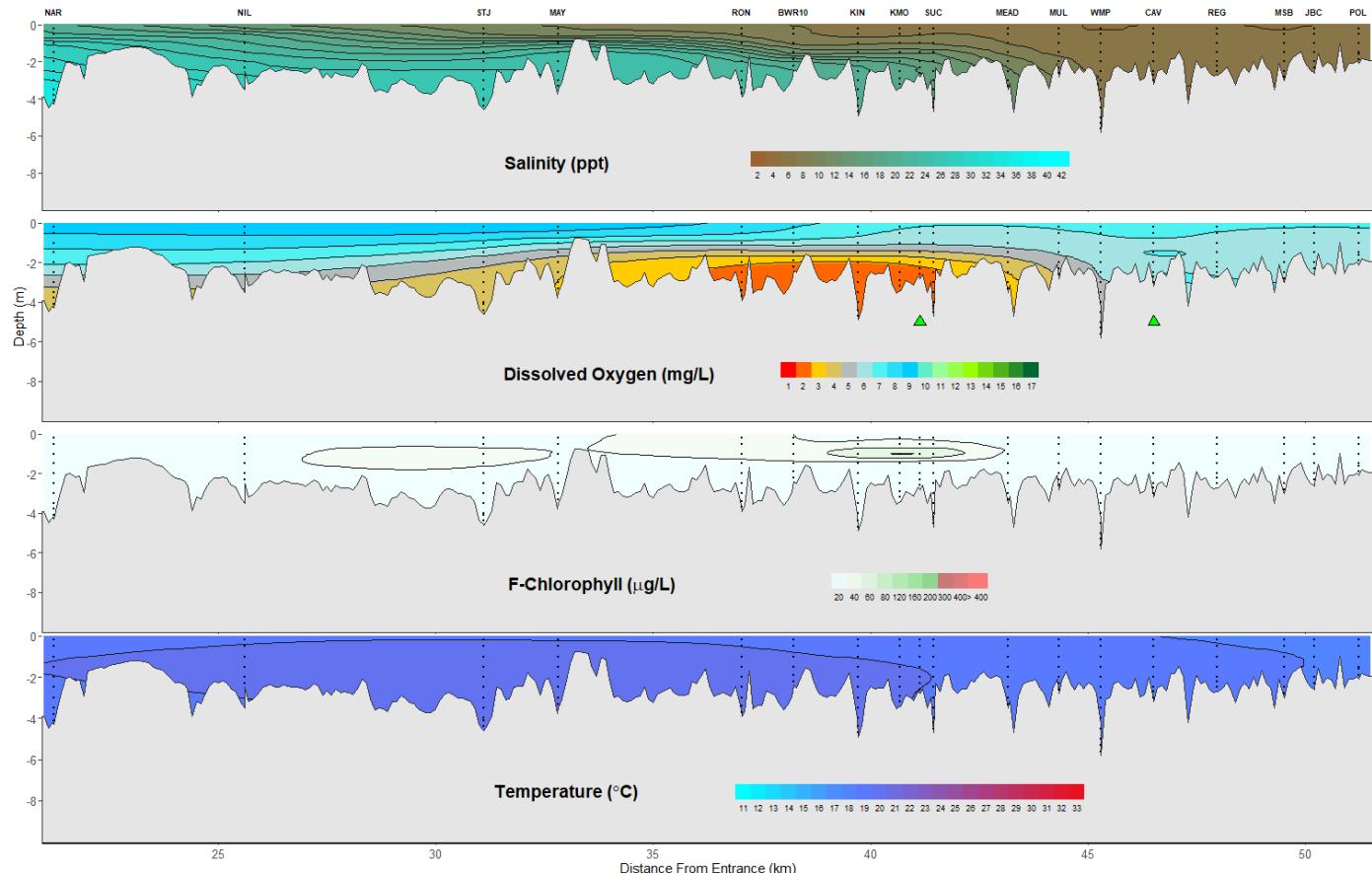
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Middle and Upper Swan Estuary- Water Quality Profiles- 29th September 2020





Date: Tuesday 29th September 2020

Weather & tide conditions: Conditions were cloudy with a variable breeze of up to 10 knots. The predicted tides at Barrack St were 0.73 m at 2:39 am (low tide), 0.9 m at 9:46 pm (high tide) and 0.63 m at 5:48 pm (second low tide). Perth recorded 12.0 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (FP1 to NAR): The Lower Swan Canning Estuary was saline from FP1 to HEA and brackish over saline at NAR. Waters were oxygenated or well oxygenated except bottom waters at NAR which were low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 17.2 to 19.3 °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 hypoxic at RON. Chlorophyll fluorescence was highest at RON indicating higher microalgal activity in this area. Water temperature ranged from 18.9 to 20.2 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was brackish from BWR10 to POL. Surface waters were oxygenated or well oxygenated. Bottom waters were low in oxygen at BWR10, MEAD and MULB FARM and hypoxic between KIN and SUC. Chlorophyll fluorescence was highest at KMO indicating higher microalgal activity in this area. Water temperature ranged from 16.1 to 19.4 °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 29th September 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)