



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

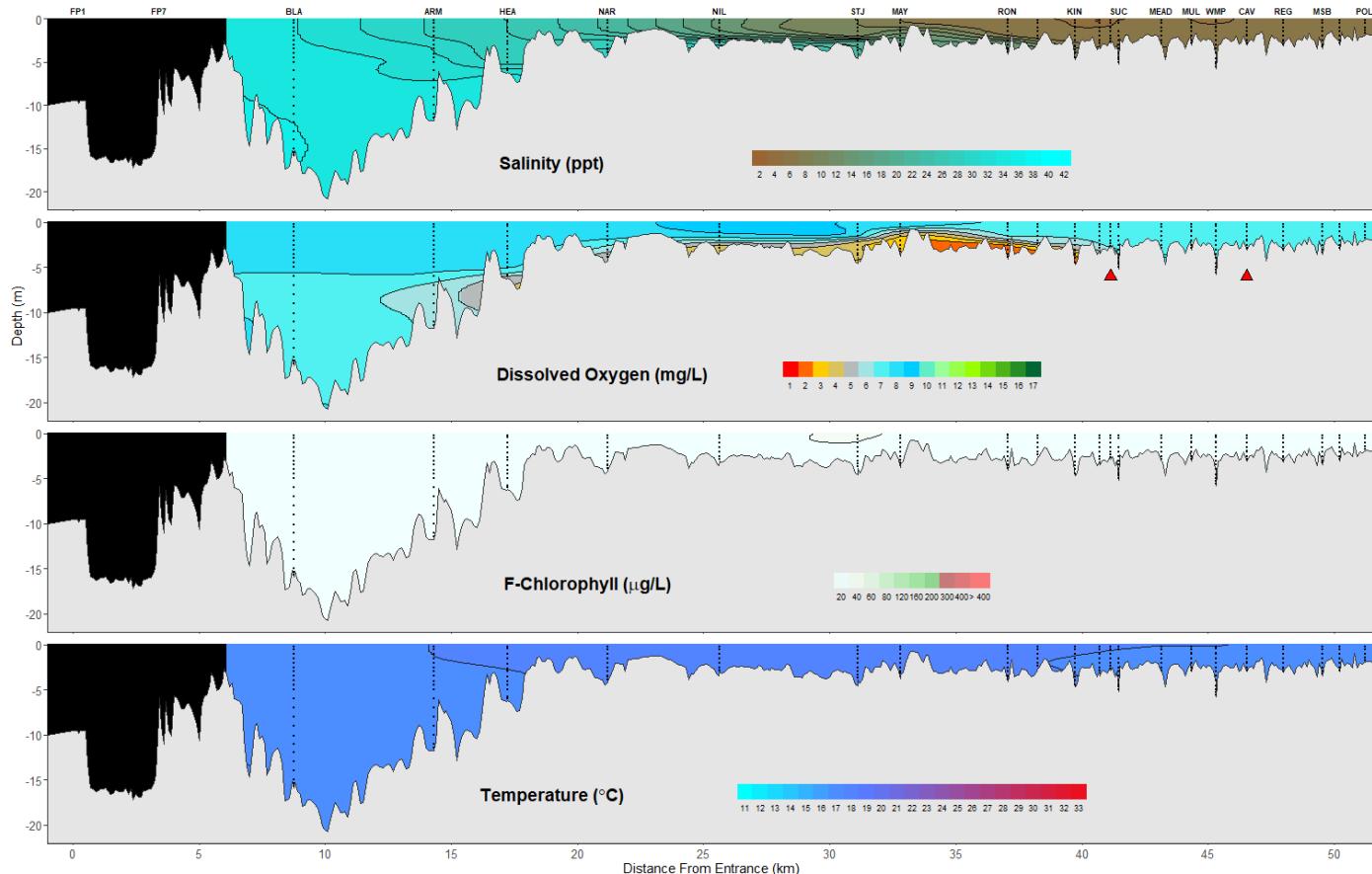
Lower Swan Canning Estuary to Upper Swan Estuary

7th September 2020

Prepared by

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

Swan Canning Estuary- Water Quality Profiles- 7th September 2020





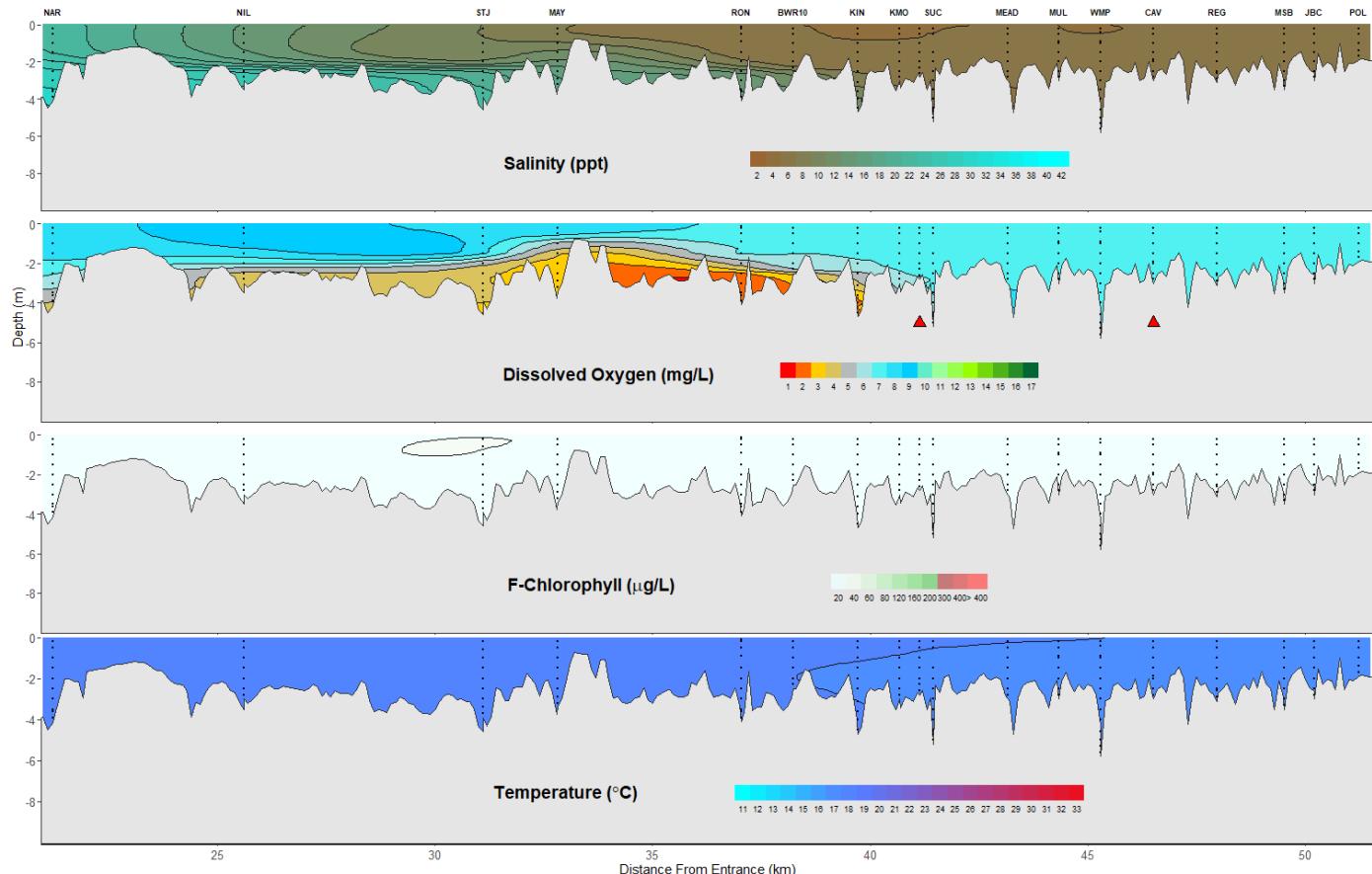
Department of Biodiversity,
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Biodiversity and
Conservation Science

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Middle and Upper Swan Estuary- Water Quality Profiles- 7th September 2020





Date: 7th August 2020

Weather & tide conditions: Conditions were cloudy with a predominantly south westerly breeze of up to 12 knots. The predicted tides at Barrack St were 0.73 m at 7:48 am (low tide), 0.77 m at 12:21 pm (high tide) and 0.69 m at 6:09 pm (low tide). Perth recorded 19.8 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 saline from BLA to HEA, brackish over saline at NAR and brackish from NIL to MAY. Waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.4 to 17.5 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish from NIL to MAY and fresh over brackish at RON. Surface waters were well oxygenated and bottom waters were low in oxygen from NIL to MAY and hypoxic at RON. Chlorophyll fluorescence was highest at STJ indicating higher microalgal activity in this area. Water temperature ranged from 17.0 to 17.8 °C.

Upper Swan Estuary (BWR10 to POL): The Upper Swan Estuary was fresh over brackish from BWR10 to KIN, at SUC and between MSB and JBC, fresh between KMO and VIT and from MEAD and REG and brackish at POL. Surface waters were well oxygenated and bottom waters were low in oxygen at SUC and hypoxic at KIN. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 16.5 to 17.4 °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 7th August 2020. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)