



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

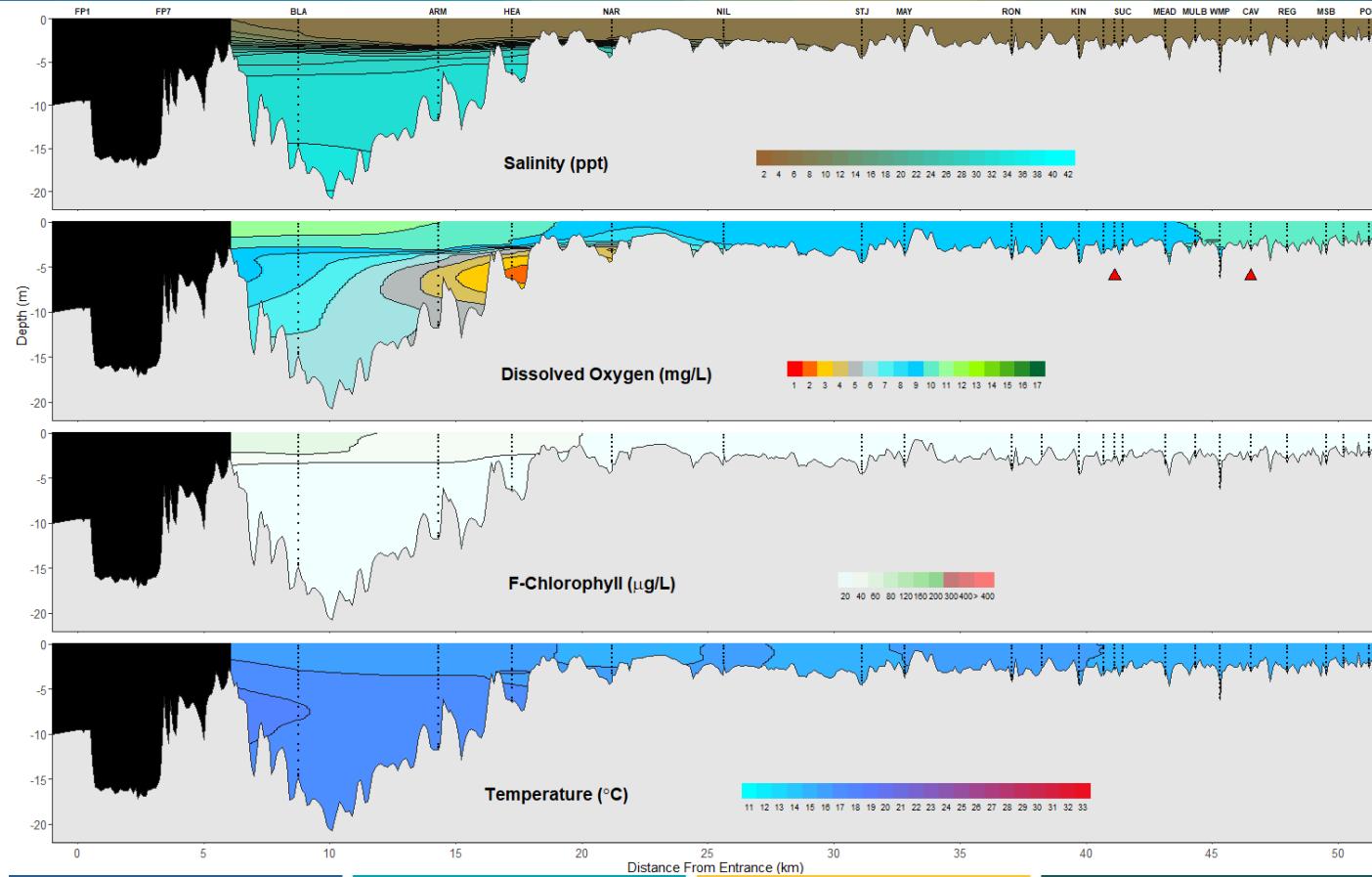
Lower Swan Canning Estuary to Upper Swan Estuary

23 August 2021

Prepared by

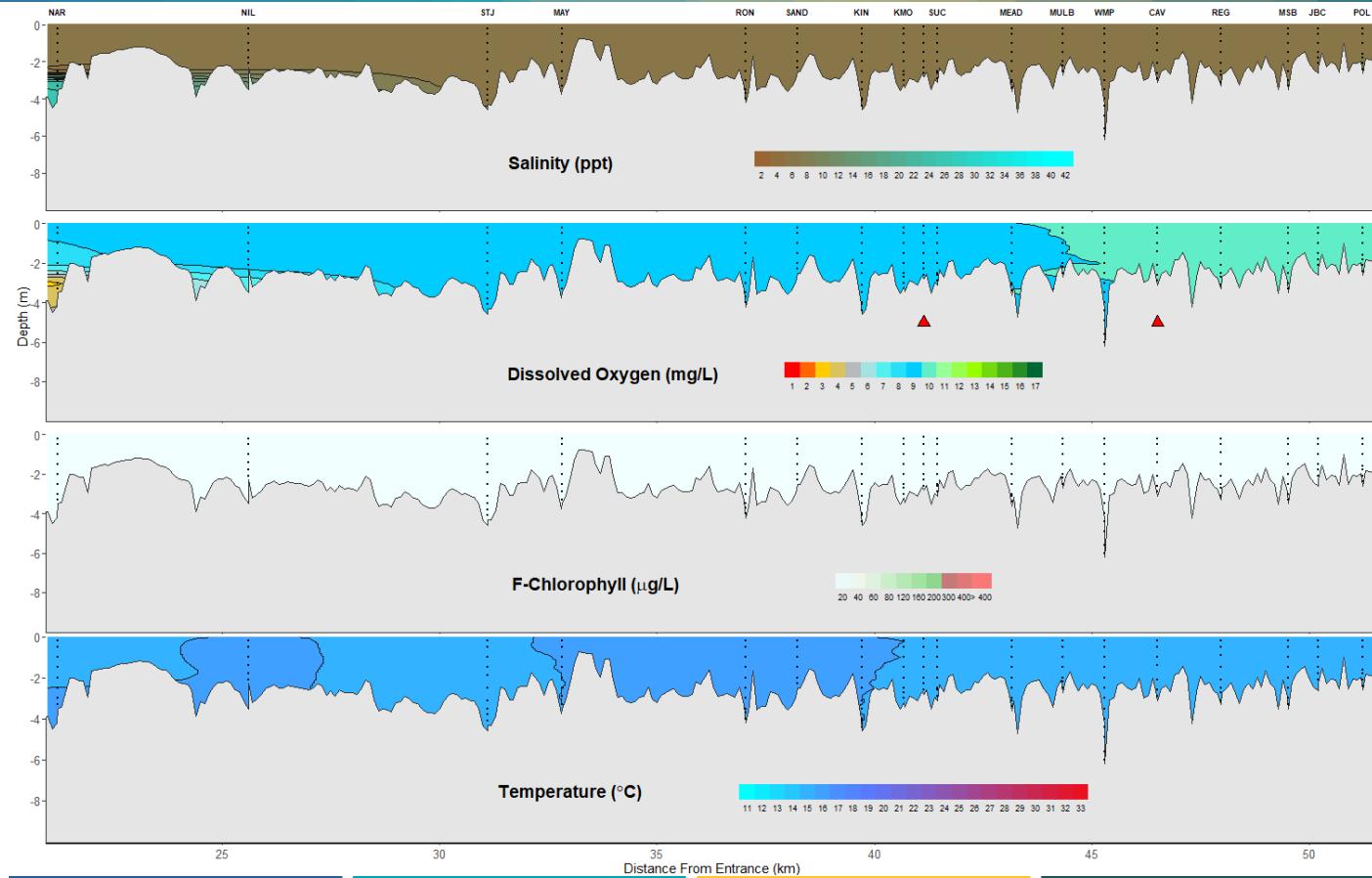
Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles- 23 August 2021





Middle and Upper Swan Estuary- Water Quality Profiles - 23 August 2021





Date: 23 August 2021

Weather & tide conditions: Conditions were sunny with an easterly breeze of up to 12 knots. The predicted tides at Barrack St were 1.11 m at 11:40 am (high tide) and 0.7 m at 9:01 pm (low tide). Perth recorded 15 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 at BLA and HEA, fresh over saline at ARM and fresh over brackish at NAR. Surface waters were well oxygenated. Bottom waters were hypoxic at HEA and low in oxygen at NAR. Chlorophyll fluorescence was highest at BLA indicating higher microalgal activity in this area. Water temperatures ranged from 14.5 to 17 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was fresh at NIL and brackish from STJ to RON. Waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 14.7 to 15.2 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish throughout, waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 14.5 to 15.1 °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 2021. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 23 August 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)