



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

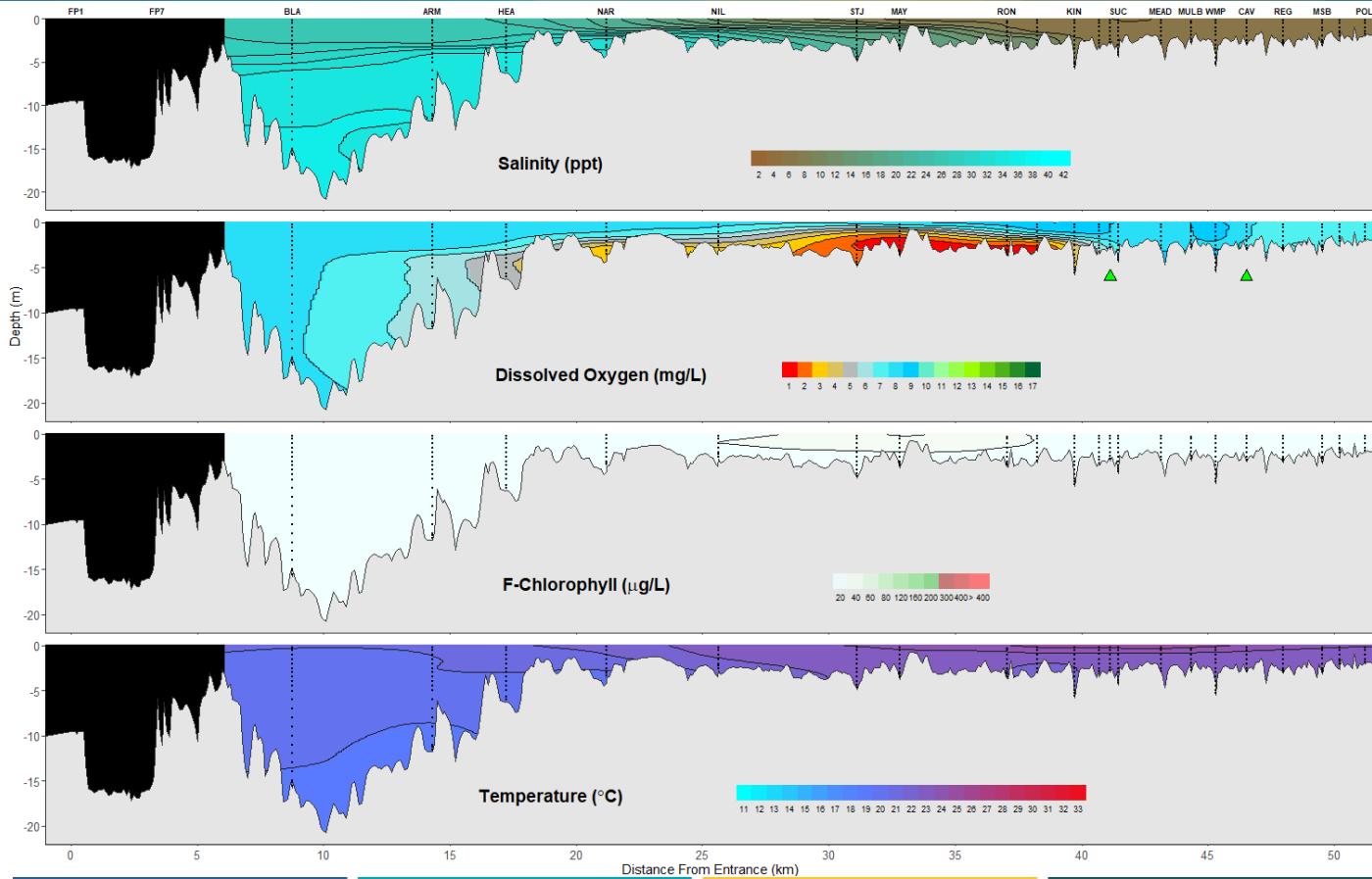
Lower Swan Canning Estuary to Upper Swan Estuary

15 November 2021

Prepared by

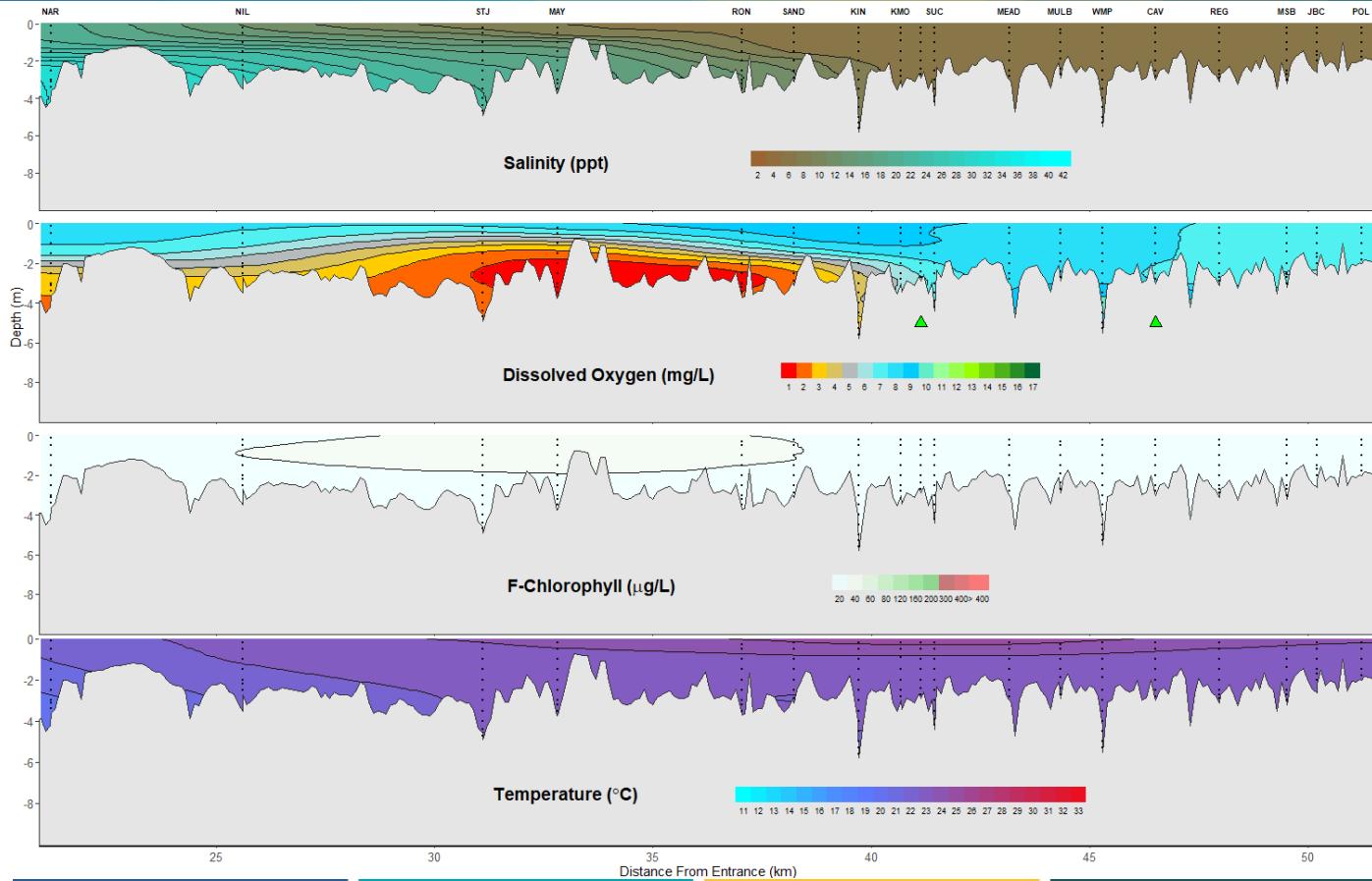
Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles – 15 November 2021





Middle and Upper Swan Estuary- Water Quality Profiles – 15 November 2021





Date: 15 November 2021

Weather & tide conditions: Conditions were clear with an easterly breeze of up to 6 knots. The predicted tides at Barrack St were 0.73 m at 5:54 am (low tide), 0.75 m at 9:35 am (high tide) and 0.71 m at 2:23pm (second low tide). Perth recorded 40.4 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

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

Lower Swan Canning Estuary (BLA to NAR): The Lower Swan Canning Estuary was saline from BLA to ARM and brackish over saline from HEA to 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 18.9 to 21.2 °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 oxygenated or well oxygenated and bottom waters were low in oxygen at NIL, hypoxic at STJ and RON and anoxic at MAY. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 21.4 to 23.4 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was fresh over brackish from SAND to VIT, fresh from MEAD to MULB and brackish from WMP to POL. Surface waters were oxygenated or well oxygenated and bottom waters were hypoxic at KIN and anoxic at SAND. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 21.6 to 25.1 °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 >6 mg/L, oxygenated >4-6 mg/L, low oxygen >2-4 mg/L, hypoxic 0.5-2 mg/L, anoxic <0.5 mg/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 15 November 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)