



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

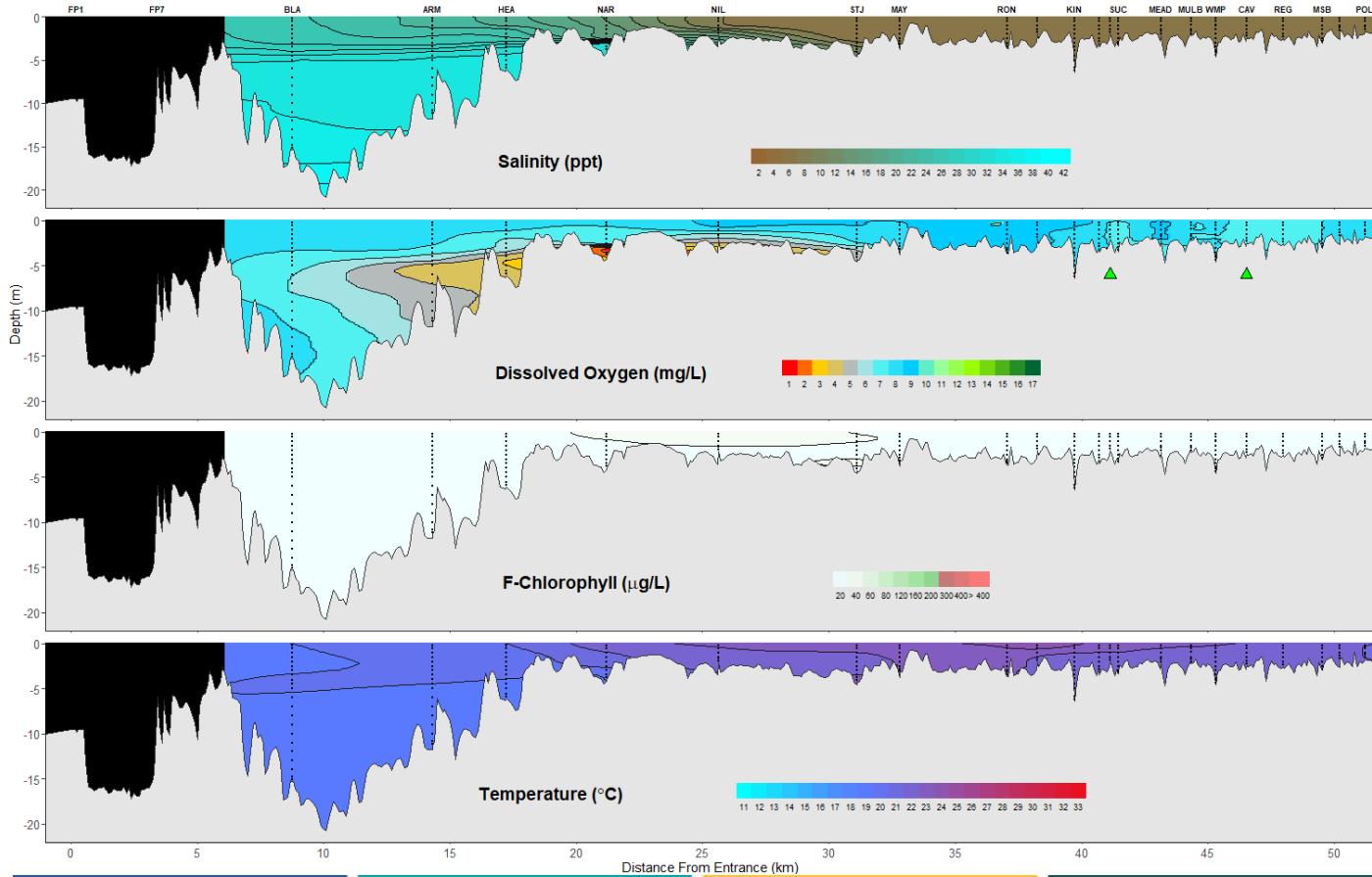
8 November 2021

Prepared by

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



Swan Canning Estuary- Water Quality Profiles – 8 November 2021





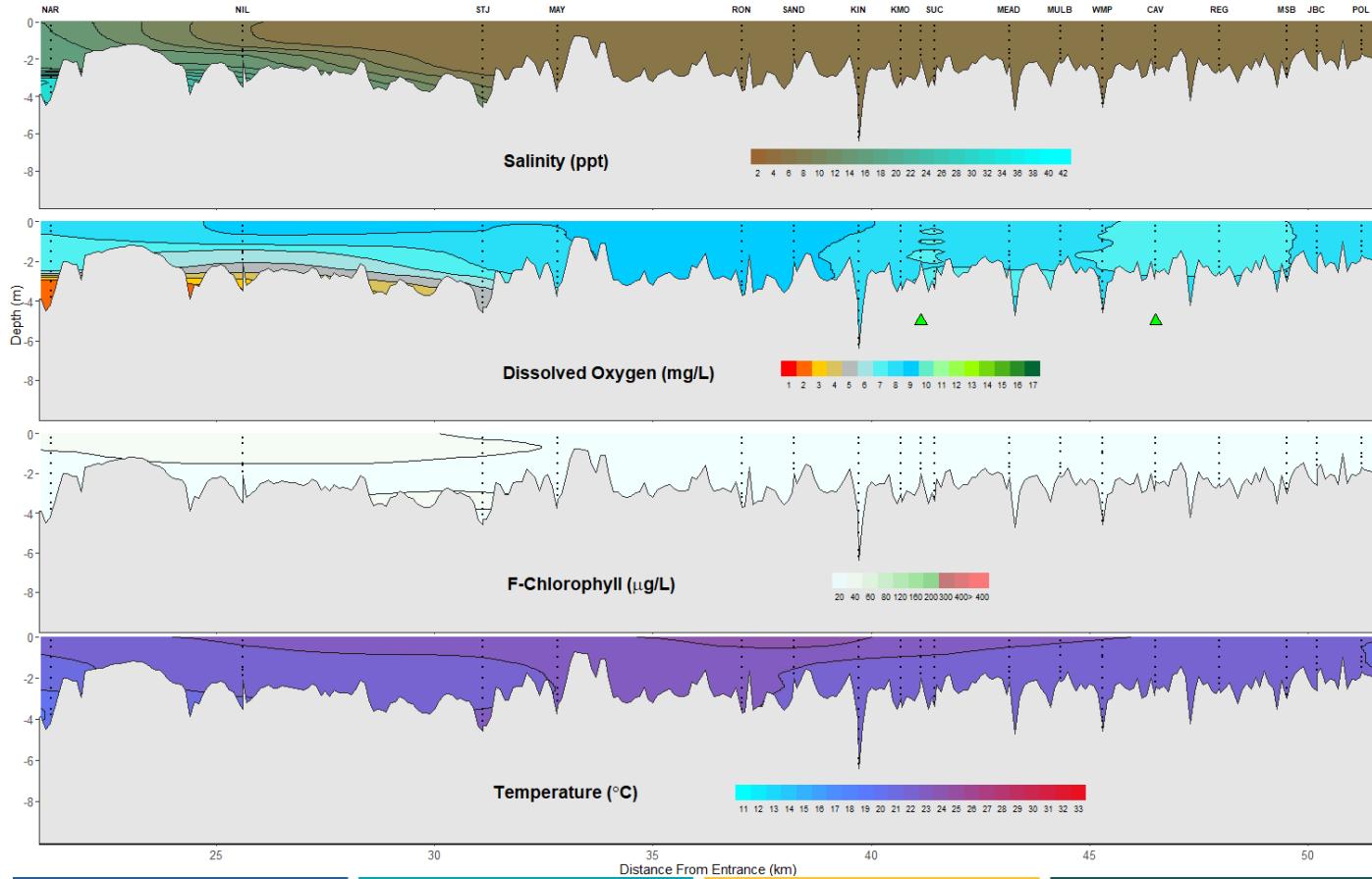
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Middle and Upper Swan Estuary- Water Quality Profiles – 8 November 2021





Date: 8 November 2021

Weather & tide conditions: Conditions were clear with an easterly breeze of up to 8 knots. The predicted tides at Barrack St were 1.12 m at 12:18 am (high tide) and 0.47 m at 11:36 am (low tide). Perth recorded no rainfall during the week prior to sampling (Bureau of Meteorology).

NB: Fremantle Port sites could not be sampled this week due to operational limitations.

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 brackish over saline, surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at HEA and hypoxic at NAR. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 18.6 to 21.5 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish at NIL, fresh over brackish at STJ, fresh at MAY and brackish at RON. Waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 21.6 to 22.9 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish, waters were well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 20.9 to 23.9 °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 8 November 2021. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)