



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Western Australia.

Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

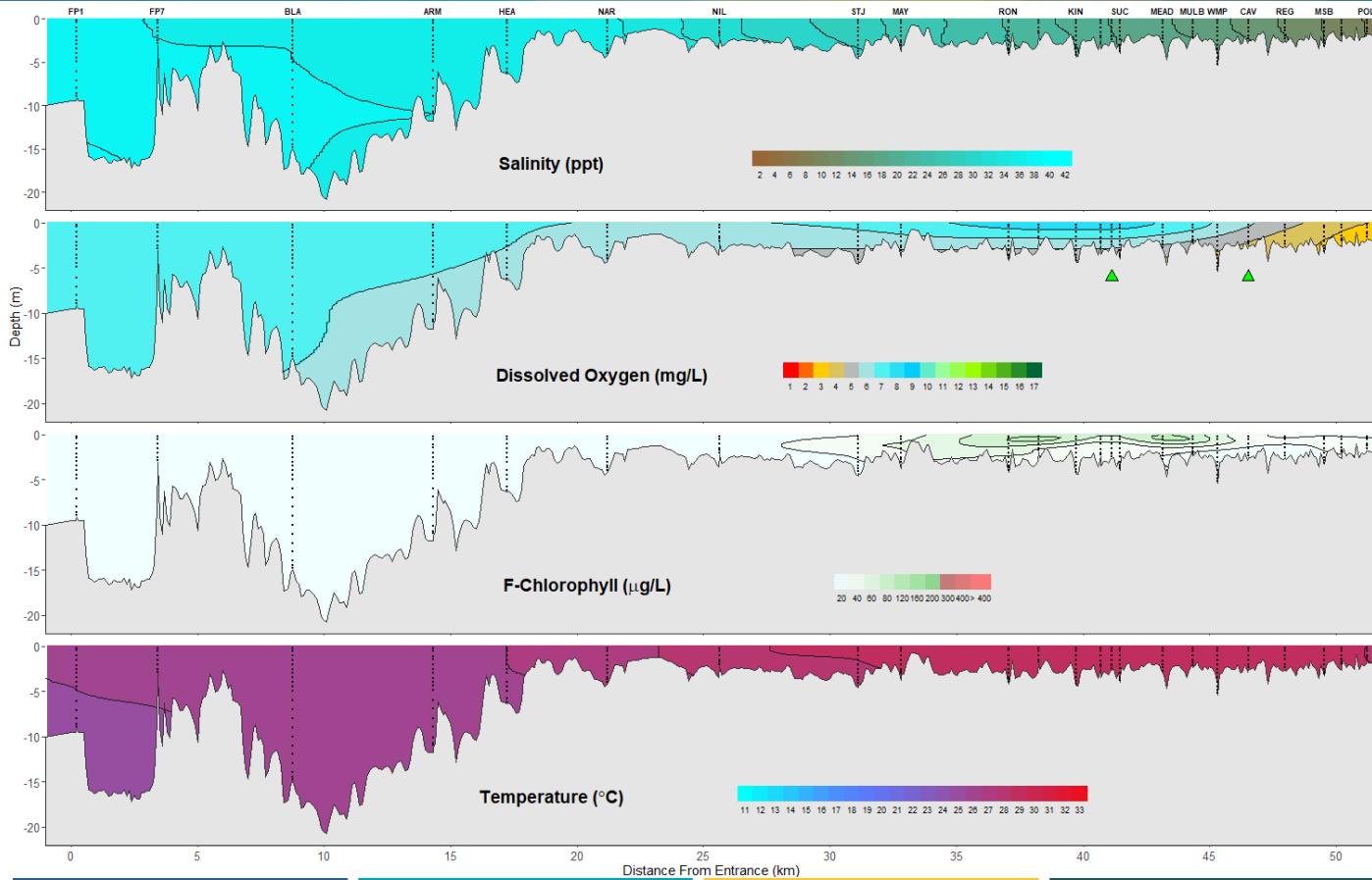
31 January 2022

Prepared by

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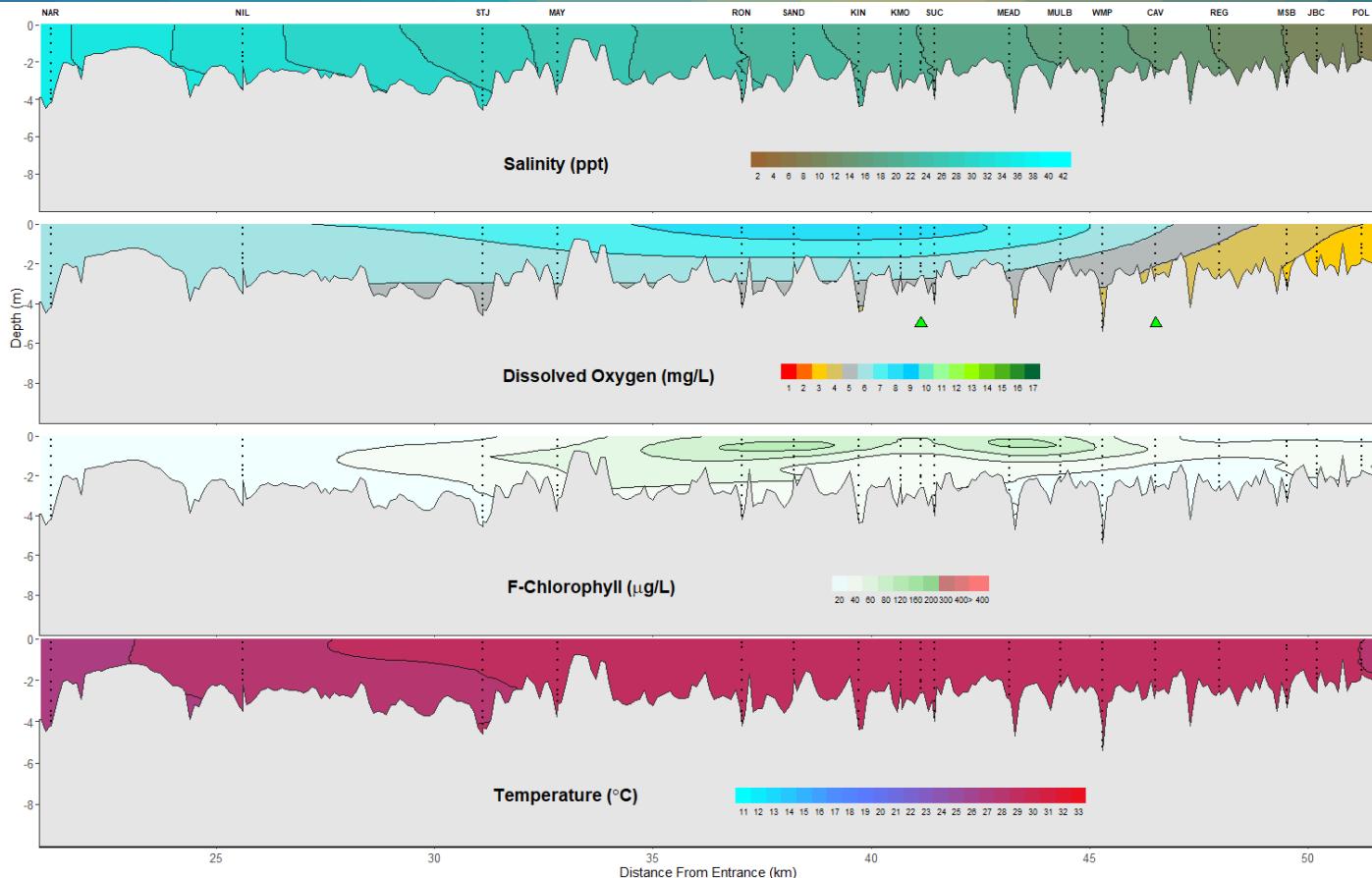


Swan Canning Estuary- Water Quality Profiles – 31January 2022





Middle and Upper Swan Estuary- Water Quality Profiles – 31 January 2022





Date: 31 January 2022

Weather & tide conditions: Conditions were generally clear with an easterly breeze of up to 13 knots. The predicted tides at Barrack St were 0.44 m at 8:37 am (low tide) and 1.20 m at 10:38 pm (high tide). Perth recorded no 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, waters were oxygenated or well oxygenated and chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 24.5 to 26.5 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline from NIL to MAY and brackish at RON. Surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at STJ and RON. Chlorophyll fluorescence was moderate at RON indicating higher microalgal activity in that area. Water temperature ranged from 27.5 to 28.8 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated between SAND and CAV and low in oxygen from REG to POL. Bottom waters were low in oxygen from WMP to POL. Chlorophyll fluorescence was moderate from SAND to KMO and at MEAD, MULB and POL indicating higher microalgal activity in those areas. Water temperature ranged from 27.9 to 28.9 °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⁻¹, oxygenated >4-6 mg L⁻¹, low oxygen >2-4 mg L⁻¹, hypoxic 0.5-2 mg L⁻¹, anoxic <0.5 mg L⁻¹

Chlorophyll fluorescence (summer): low < 50 µg L⁻¹, moderate 50-150 µg L⁻¹, high 150-400 µg L⁻¹, extreme > 400 µg L⁻¹

Recommended reference: Department of Biodiversity, Conservation and Attractions 2021. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 31 January 2022. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)