



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

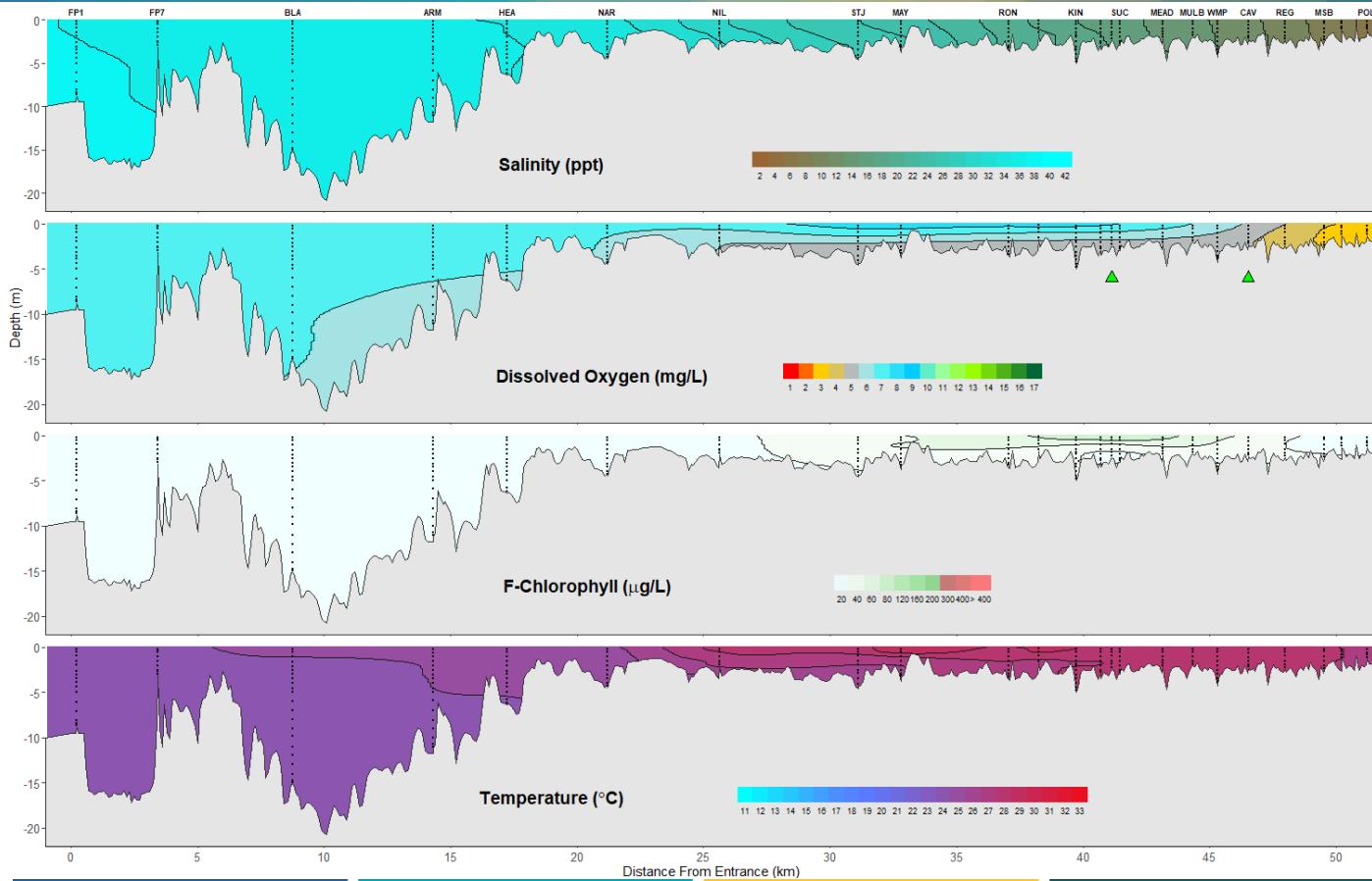
17 January 2022

Prepared by

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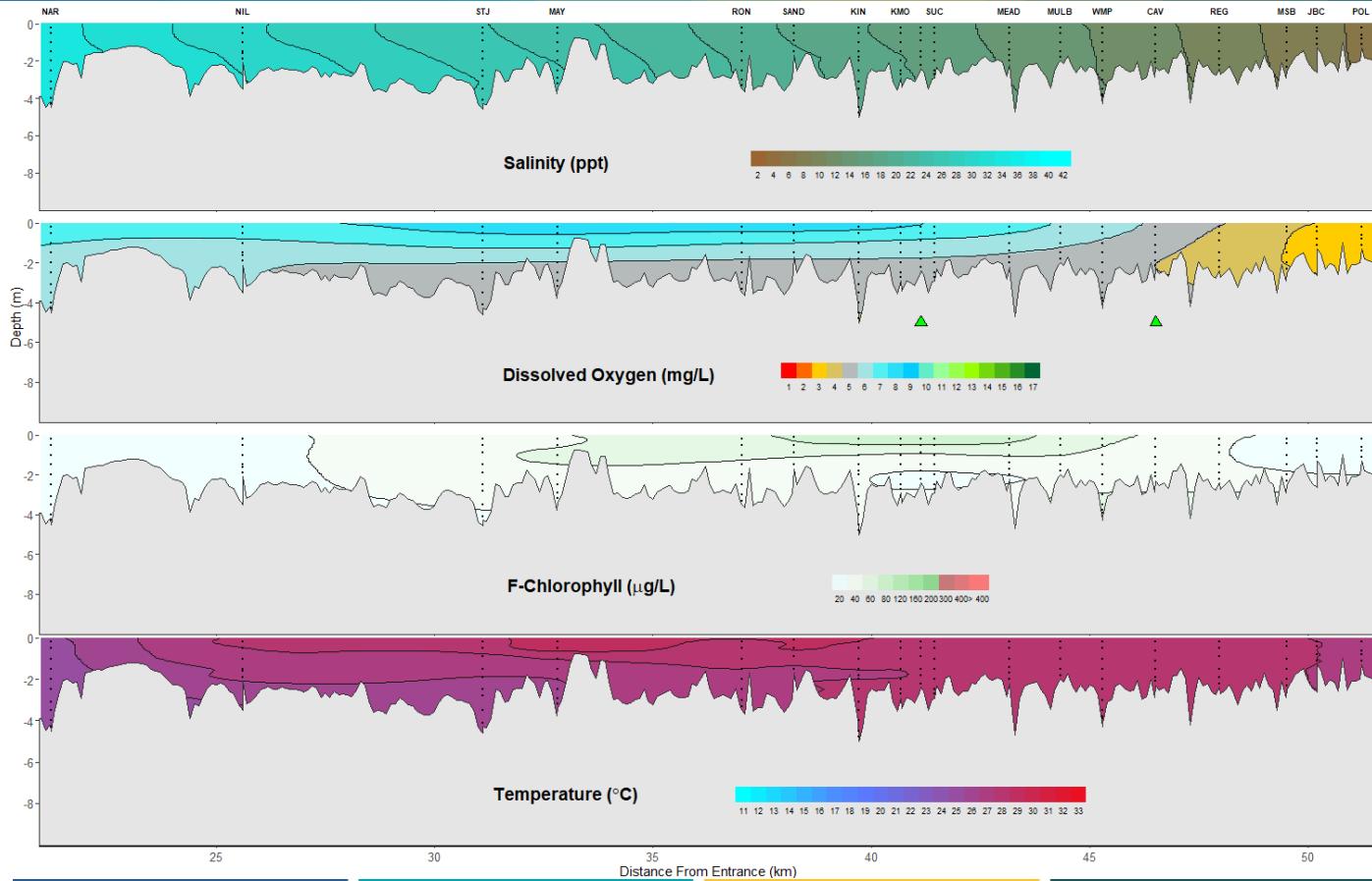


Swan Canning Estuary- Water Quality Profiles – 17 January 2022





Middle and Upper Swan Estuary- Water Quality Profiles – 17 January 2022





Date: 17 January 2022

Weather & tide conditions: Conditions were clear with a variable breeze of up to 14 knots. The predicted tides at Barrack St were 0.53 m at 8:40 am (low tide) and 1.15 m at 10:39 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 and waters were oxygenated or well oxygenated. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 23.3 to 24.8 °C.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL, brackish over saline at STJ and brackish from MAY to RON. Waters were well oxygenated except bottom waters at MAY which were low in oxygen. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 25.6 to 27.6 °C.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish. Surface waters were oxygenated or well oxygenated between SAND and REG and low in oxygen from MSB to POL. Bottom waters were low in oxygen at KIN, KMO, SUC and CAV and from REG to POL. Chlorophyll fluorescence was moderate from SAND to MEAD and at WMP indicating higher microalgal activity in those areas. Water temperature ranged from 27.3 to 28.2 °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 17 January 2022. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)