



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

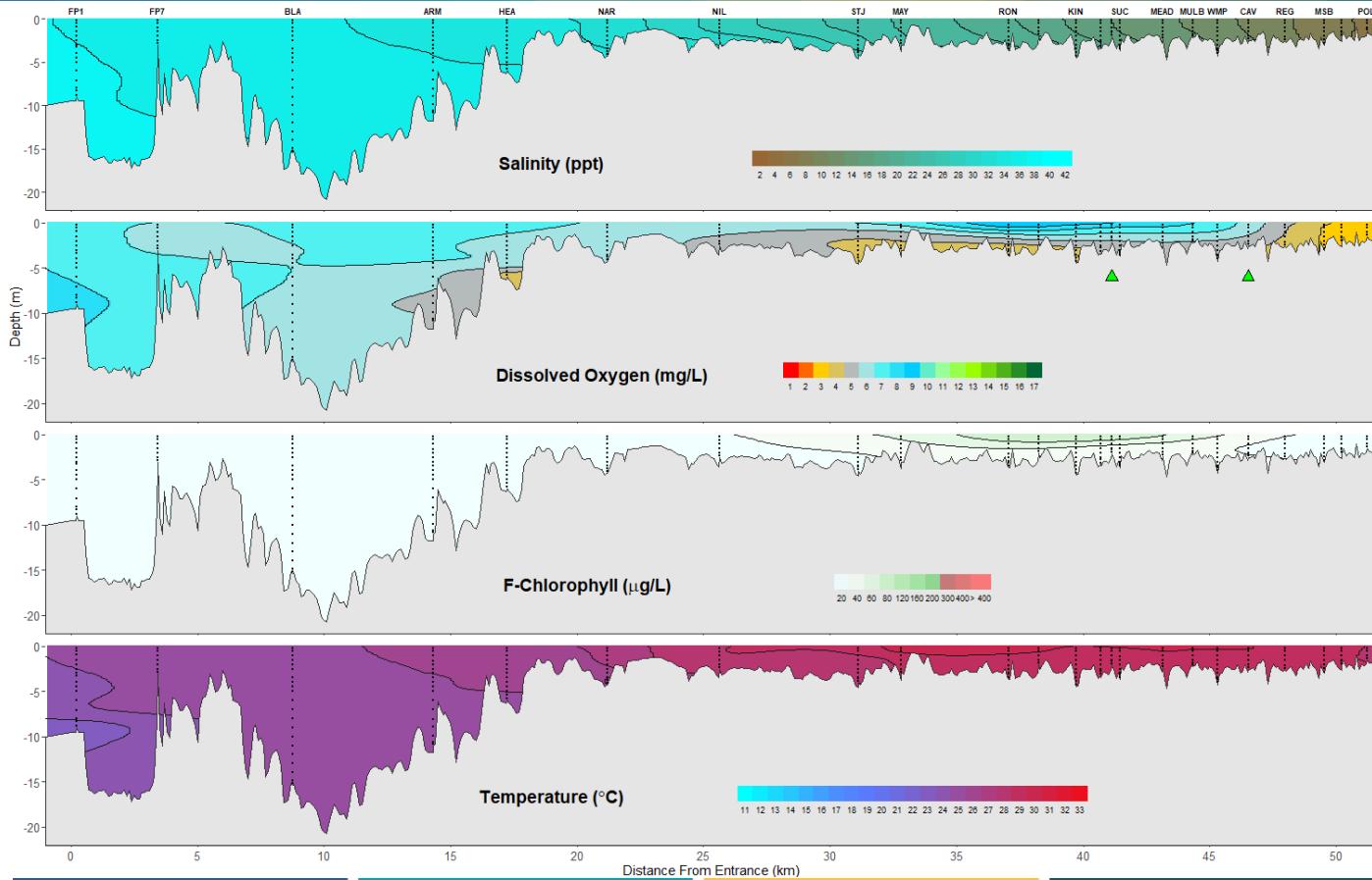
4 January 2022

Prepared by

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Swan Canning Estuary- Water Quality Profiles – 4 January 2022





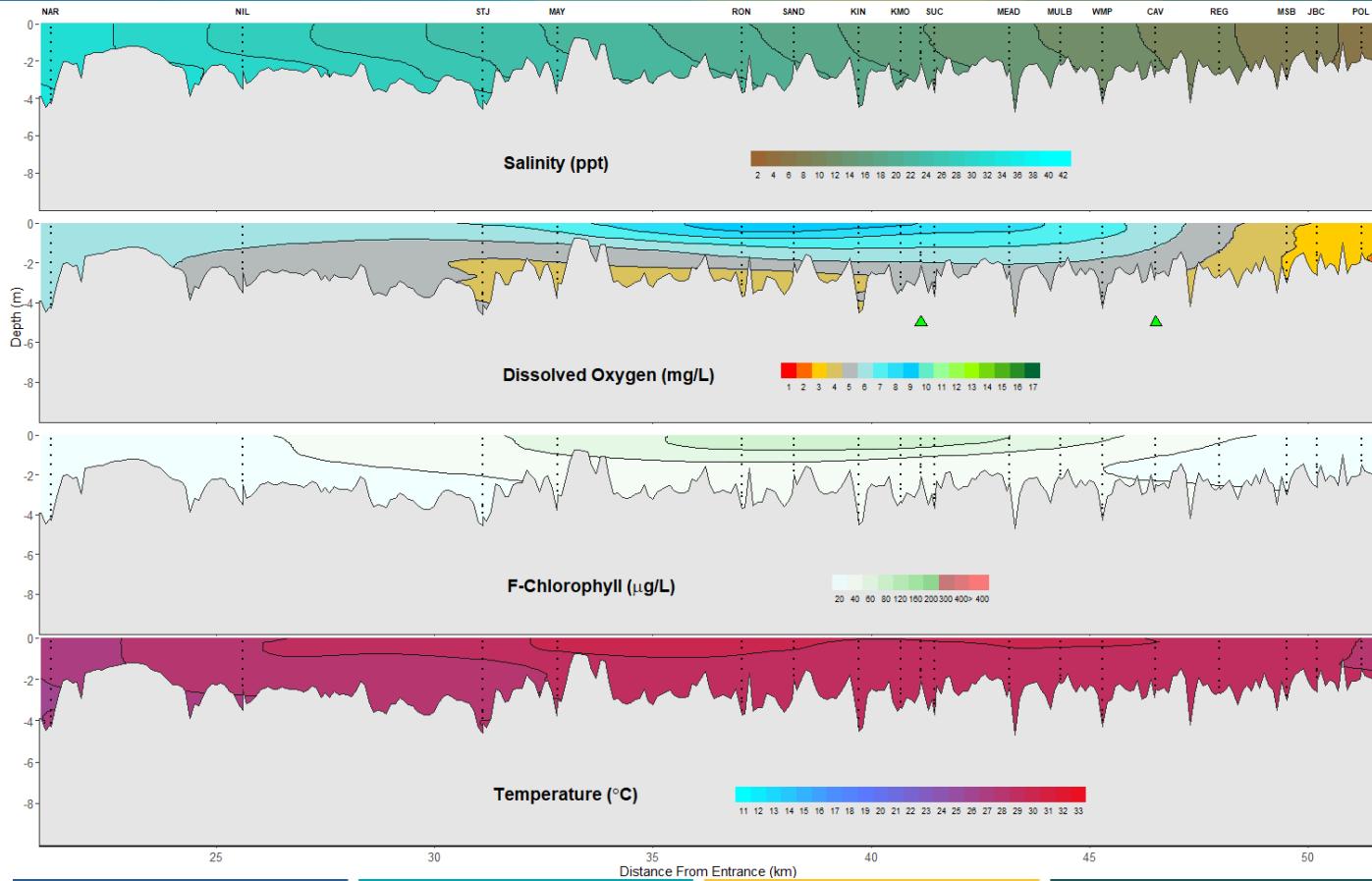
Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

We're working for
Western Australia.

Middle and Upper Swan Estuary- Water Quality Profiles – 4 January 2022





Date: 4 January 2022

NB: Monitoring delayed due to public holiday on 3 January 2022.

Weather & tide conditions: Conditions were clear with an easterly breeze of up to 8 knots. The predicted tides at Barrack St were 0.2 m at 7:46 am (low tide) and 1.10 m at 10:41 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 (BLA to NAR): The Lower Swan Canning Estuary was saline, surface waters were oxygenated or well oxygenated and bottom waters were low in oxygen at HEA. Chlorophyll fluorescence was low throughout this zone. Water temperature ranged from 22.5 to 26.3 °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. Surface waters were well oxygenated and bottom waters were low in oxygen at STJ and RON. Chlorophyll fluorescence was low between NIL and MAY and moderate at RON indicating higher microalgal activity in that area. Water temperature ranged from 27.2 to 29.4 °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 between KIN and KMO and from REG to POL. Chlorophyll fluorescence was moderate between SAND and WMP indicating higher microalgal activity in that area. Water temperature ranged from 27.8 to 29.6 °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