



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

10 October 2022

Prepared by

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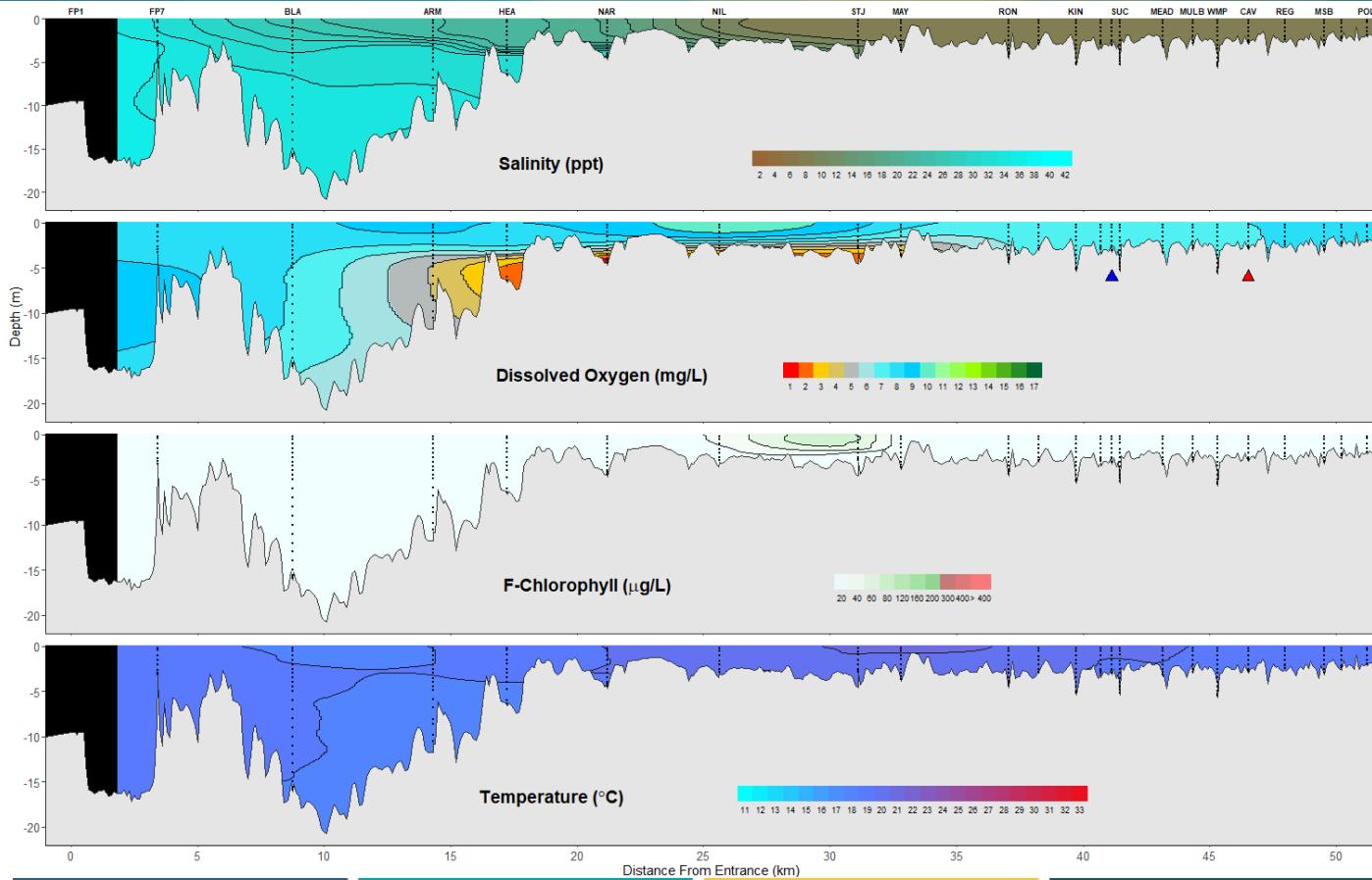
Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

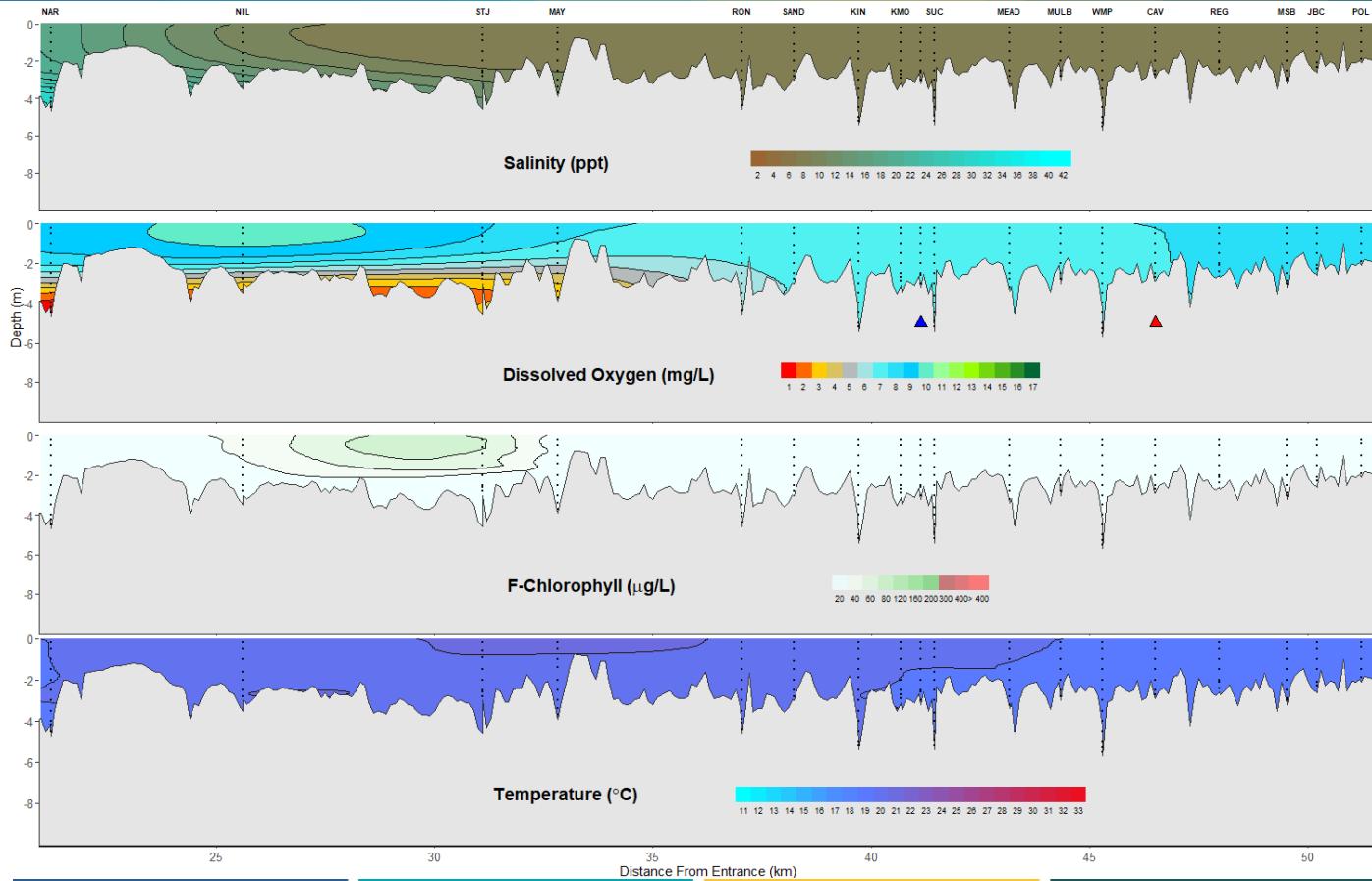
We're working for
Western Australia.

Middle and Upper Swan Estuary- Water Quality Profiles – 10 October 2022





Swan Canning Estuary- Water Quality Profiles – 10 October 2022





Date: 10 October 2022

Note: FP1 could not be sampled due to heavy swell.

Weather & tide conditions: Conditions were overcast with a strong south westerly breeze of up to 24 knots. The predicted tides at Barrack St were 0.66 m at 6:13 am (low tide), 0.82 m at 12:22 pm (high tide) and 0.74 m at 4:39pm (2nd low tide). Perth recorded 8.8 mm of rainfall during the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was operable but not triggered to provide oxygen and the Caversham oxygenation plant was inoperable during the 24 hours prior to sampling as equipment has been removed to avoid damage from flooding.

Lower Swan Canning Estuary (FP7 to NAR): The Lower Swan Canning Estuary was saline at FP7 and brackish over saline from BLA to NAR. Waters were oxygenated or well oxygenated throughout except for bottom waters at HEA which were low in oxygen, and NAR which were anoxic. Chlorophyll fluorescence was low throughout this zone and water temperature ranged from 17.7 to 19.2 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish throughout. Waters were oxygenated or well oxygenated throughout except for bottom waters at STJ and MAY which were hypoxic. Chlorophyll fluorescence was moderate within the surface waters at STJ and water temperature ranged from 19.5 to 20.1 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish and waters were well oxygenated throughout. Chlorophyll fluorescence was low and temperature ranged from 18.1 to 19.7 °C at the time of sampling.

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 (mod/high flow): low < 60 µg L⁻¹, moderate 60-160 µg L⁻¹, high 160-400 µg L⁻¹, extreme > 400 µg L⁻¹