



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

Lower Swan Canning Estuary to Upper Swan Estuary

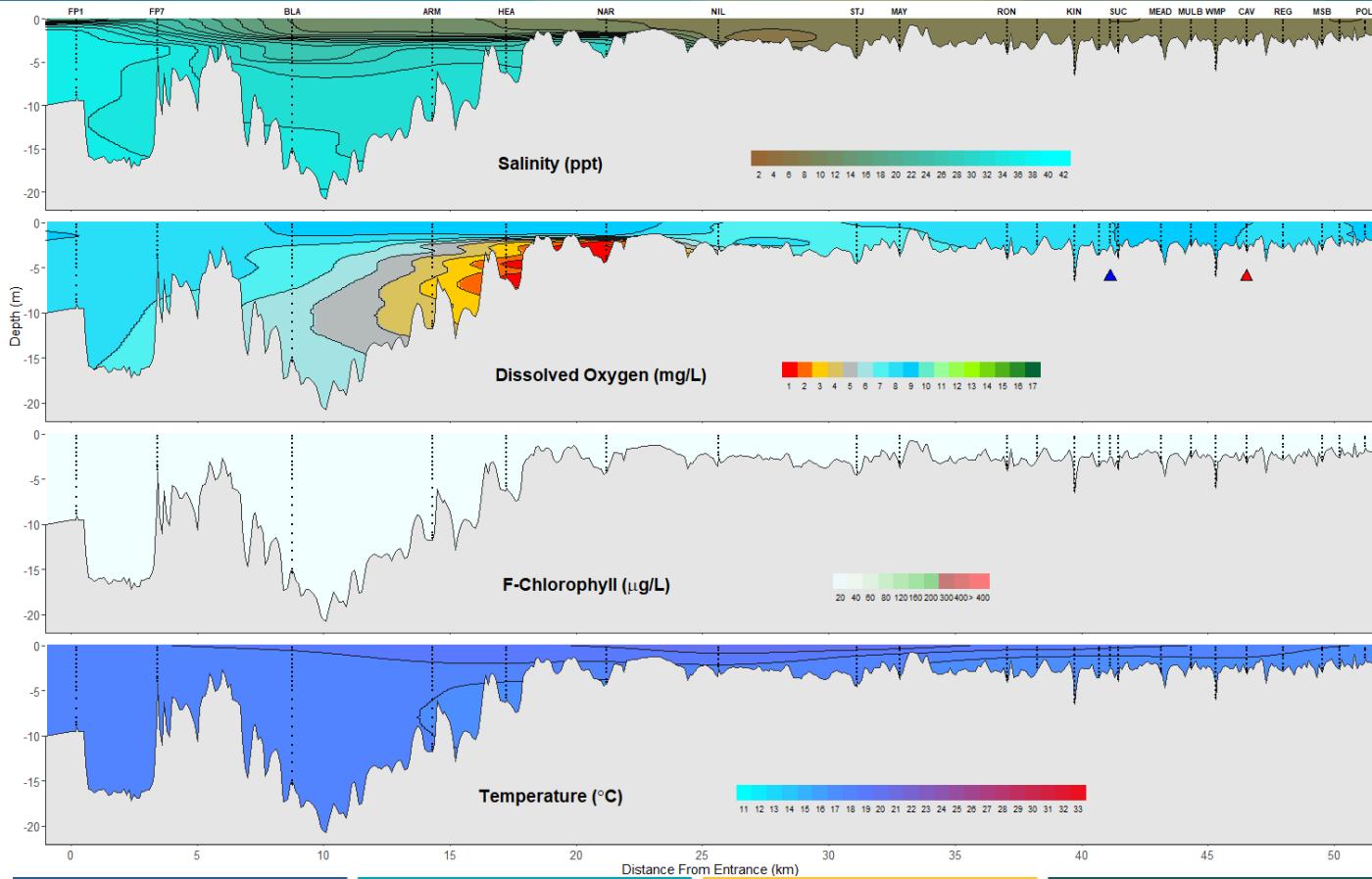
27 September 2022

Prepared by

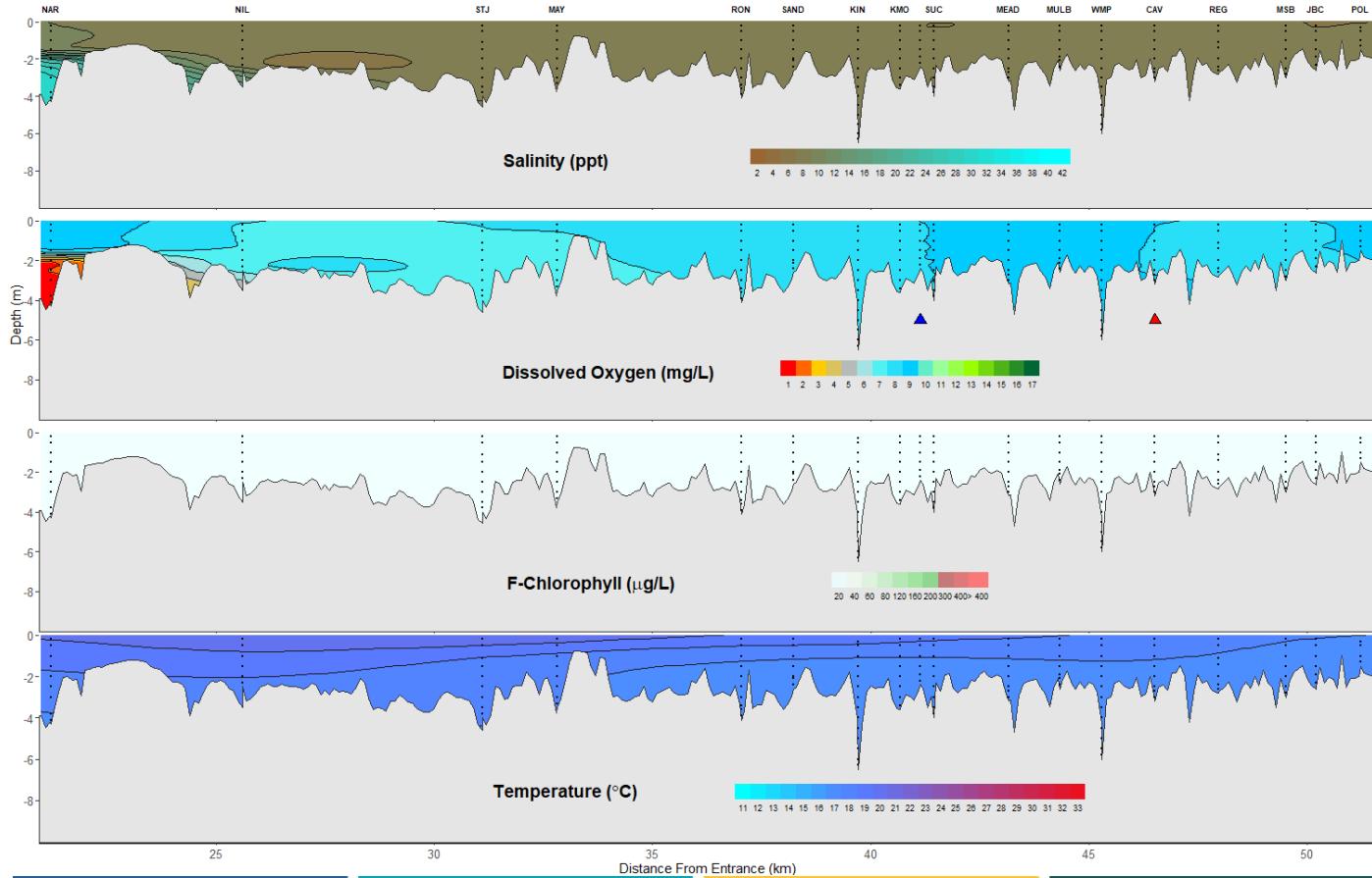
Rivers and Estuaries Science
Biodiversity and Conservation Science
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Middle and Upper Swan Estuary- Water Quality Profiles – 27 September 2022



Swan Canning Estuary- Water Quality Profiles – 27 September 2022





Date: 27 September 2022

Note: Sampling was delayed due to the Queens birthday public holiday on the 26th September.

Weather & tide conditions: Conditions were clear with a light easterly breeze of up to 3 knots. The predicted tides at Barrack St were 0.69 m at 6:18 am (low tide) and 0.86 m at 12:29 pm (high tide). Perth recorded 9.4 mm of rainfall during the 8 days prior to sampling (Bureau of Meteorology; extra day delay between sampling due to public holiday).

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 (FP1 to NAR): The Lower Swan Canning Estuary was saline at FP1 and brackish over saline from FP7 to NAR. Surface waters were oxygenated or well oxygenated throughout and bottom waters were low in oxygen at ARM, hypoxic at HEA, and anoxic at NAR. Chlorophyll fluorescence was low throughout this zone and water temperature ranged from 16.9 to 19.0 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish and waters were well oxygenated throughout. Chlorophyll fluorescence was low and water temperature ranged from 16.8 to 20.5 °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 16.5 to 20.0 °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