



Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

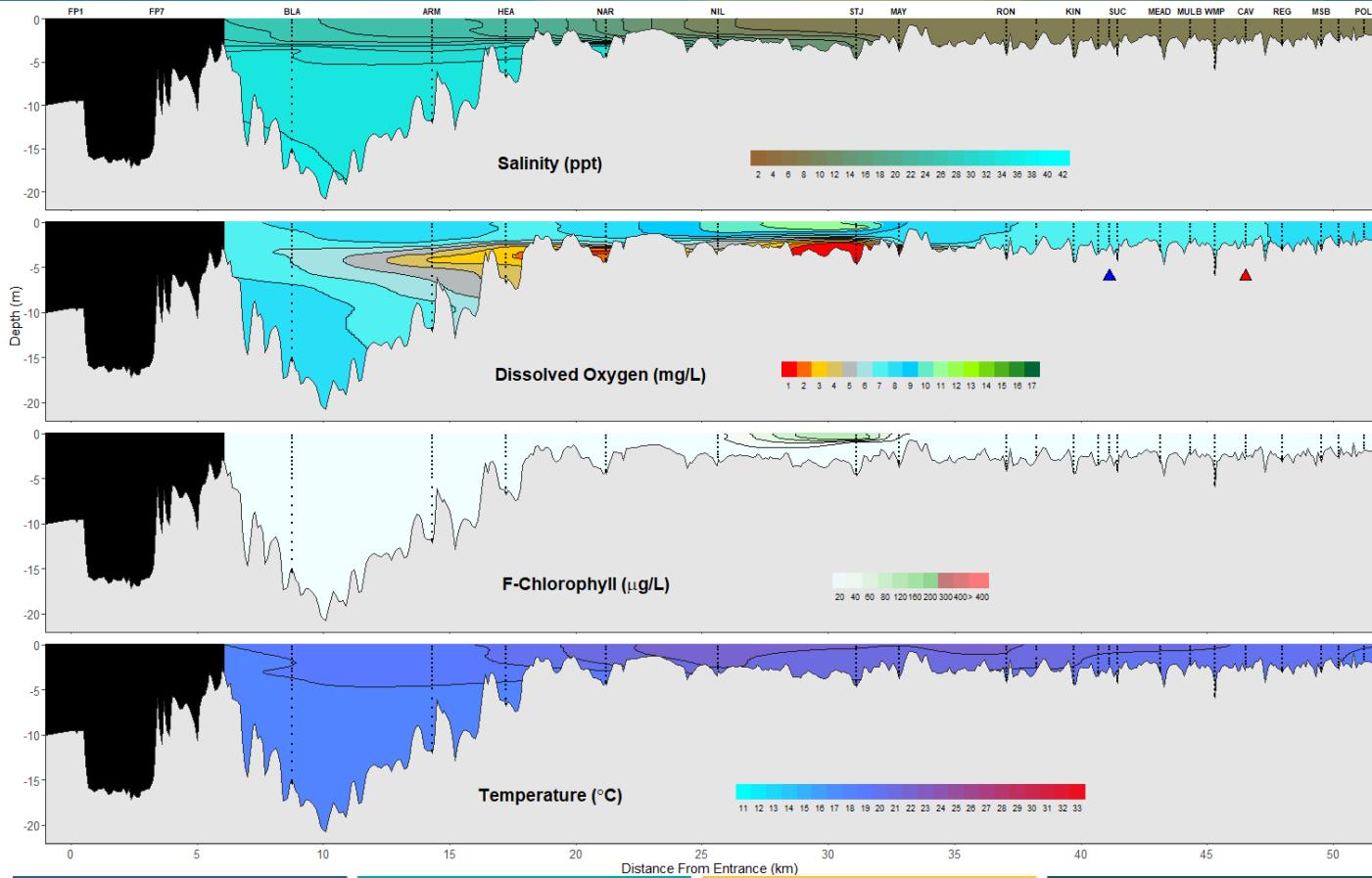
Lower Swan Canning Estuary to Upper Swan Estuary

17 October 2022

Prepared by

Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles – 17 October 2022





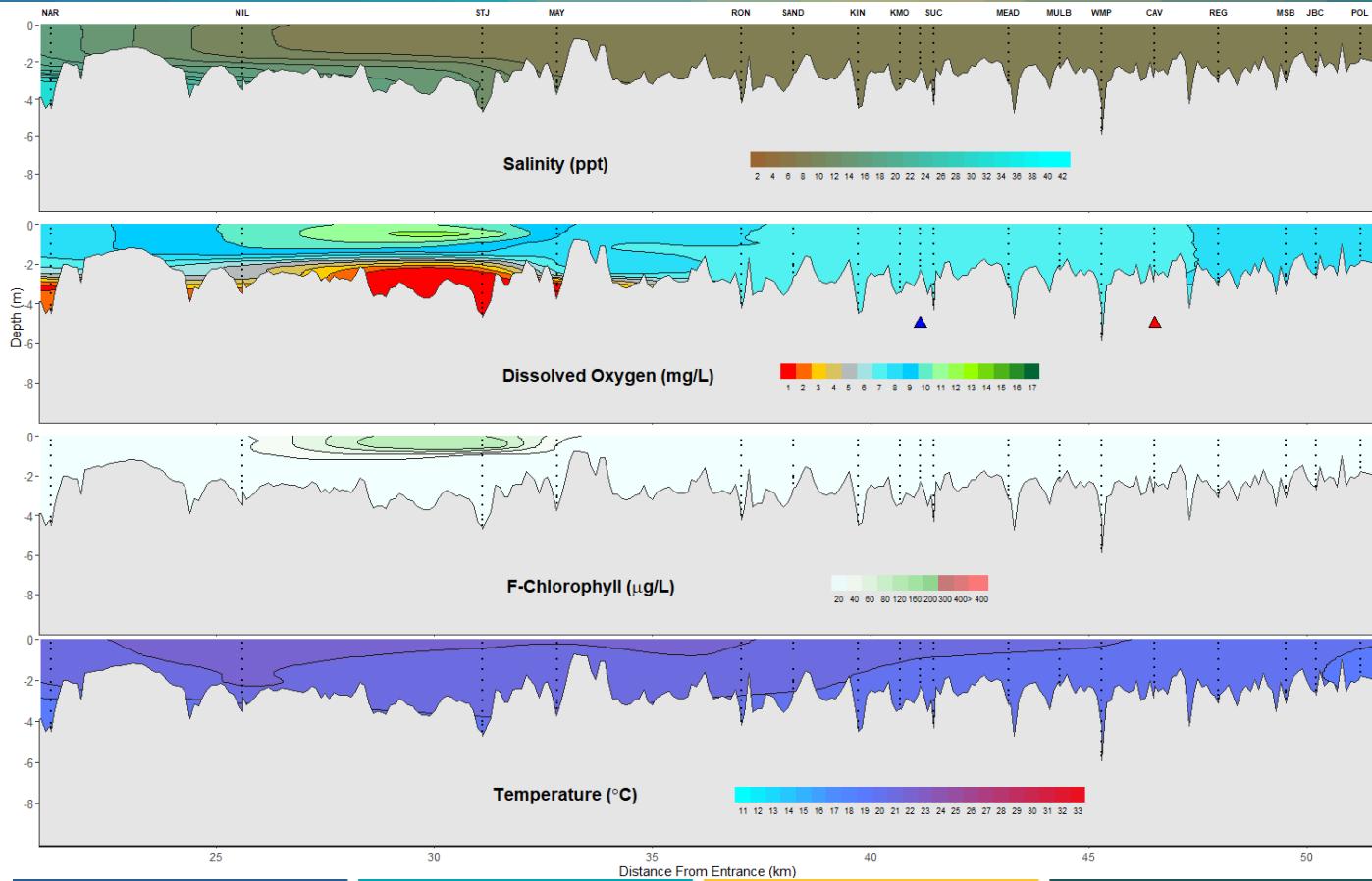
Department of Biodiversity,
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Biodiversity and
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Middle and Upper Swan Estuary- Water Quality Profiles – 17 October 2022





Date: 17 October 2022

Weather & tide conditions: Conditions were overcast with a light south westerly breeze of up to 8 knots. The predicted tides at Barrack St were 1 m at 1:55 am (high tide) and 0.58 m at 2:46 pm (low tide). Perth recorded 1.4 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 (BLA to NAR): The Lower Swan Canning Estuary was 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 bottom waters at NAR which were hypoxic. Chlorophyll fluorescence was low throughout this zone and water temperature ranged from 17.7 to 20.8 °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 anoxic. Chlorophyll fluorescence was moderate within the surface waters at STJ and water temperature ranged from 19.7 to 21.3 °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 18.9 to 20.8 °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

Recommended reference: Department of Biodiversity, Conservation and Attractions, 2022. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 17 October 2022*. Rivers and Estuaries Science (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)