



Department of Biodiversity,
Conservation and Attractions



Biodiversity and
Conservation Science

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Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

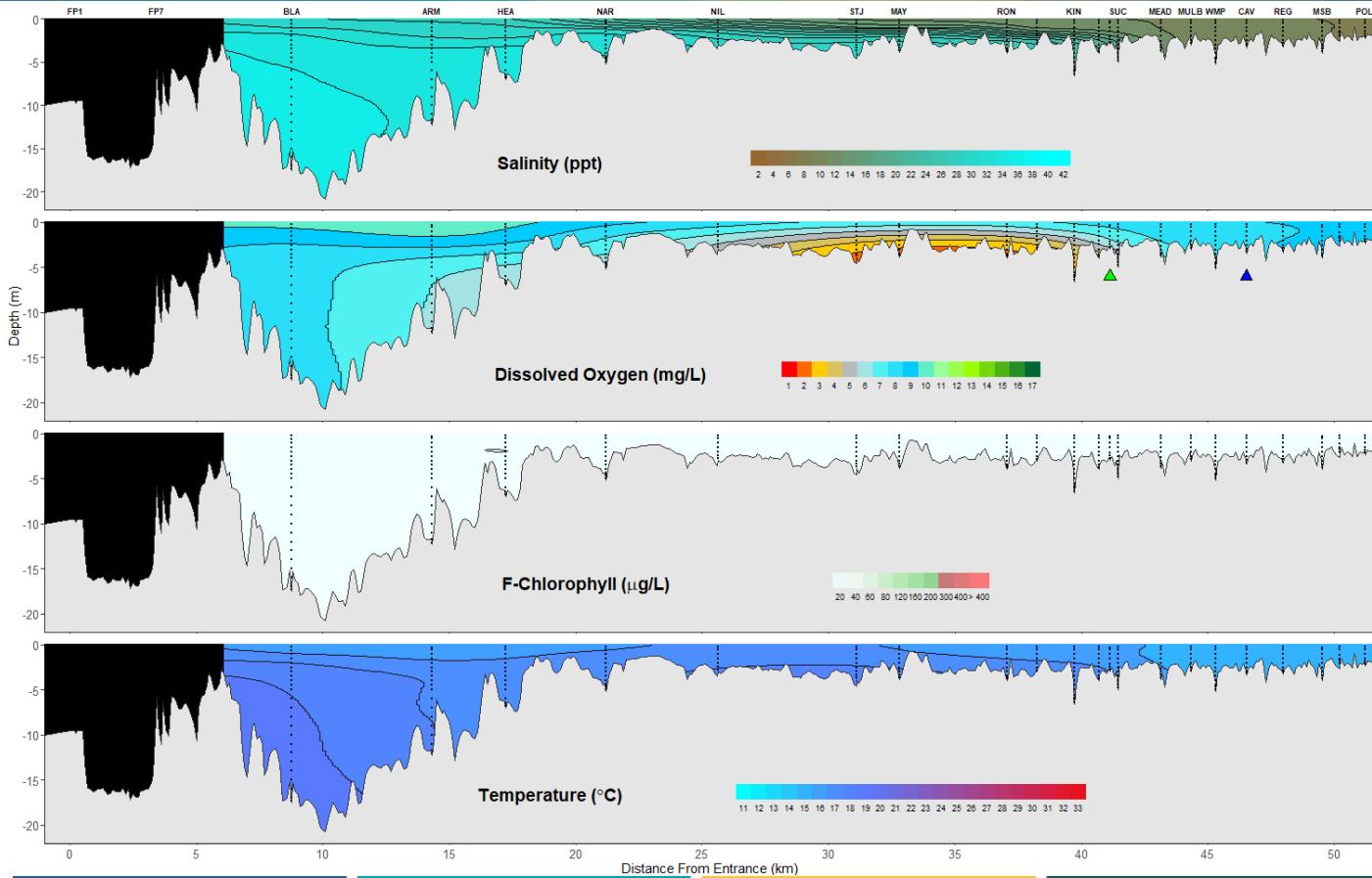
Lower Swan Canning Estuary to Upper Swan Estuary

27 June 2022

Prepared by

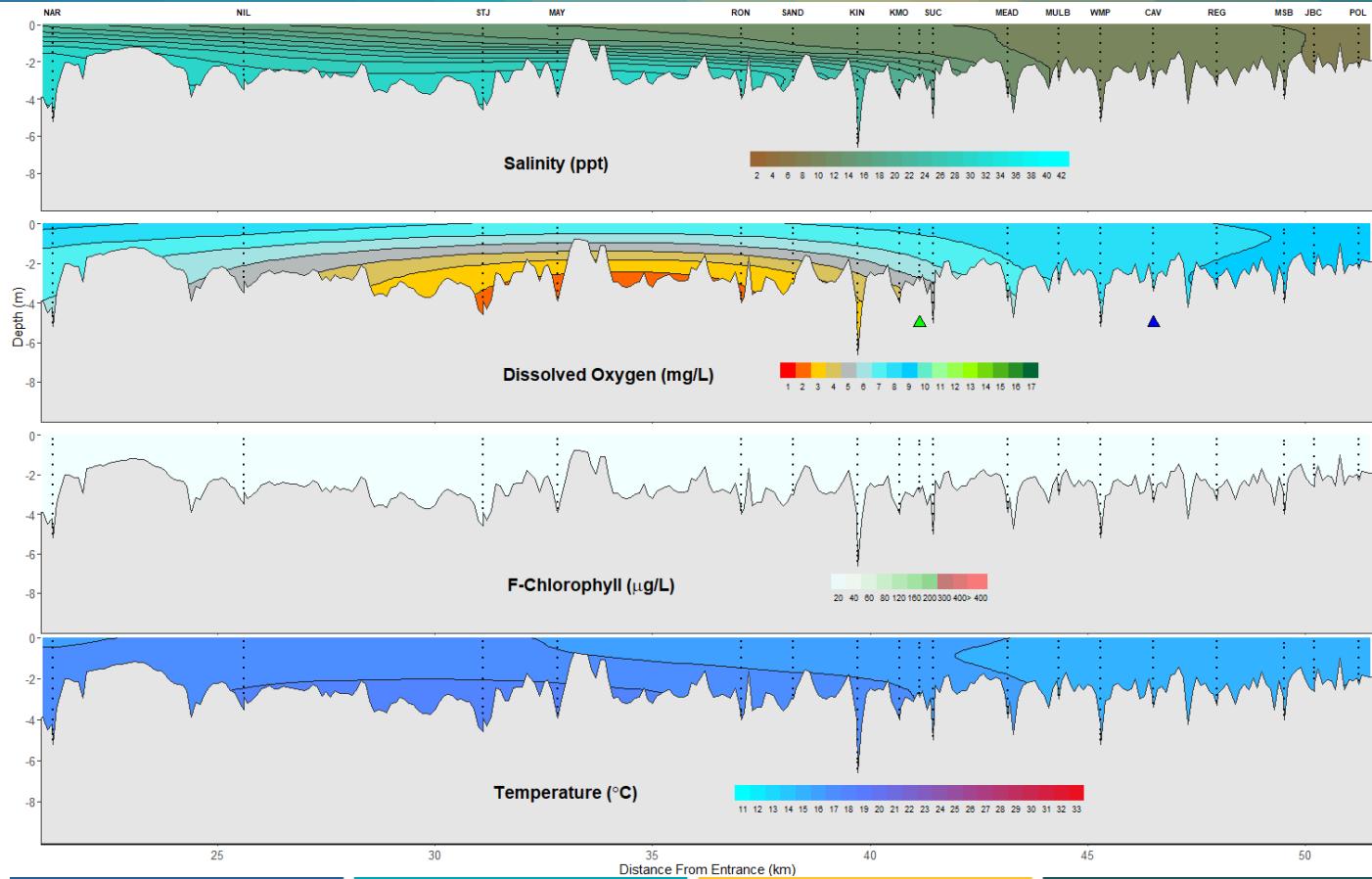
Rivers and Estuaries Science
Biodiversity and Conservation Science
Department of Biodiversity, Conservation and Attractions

Swan Canning Estuary- Water Quality Profiles – 27 June 2022





Middle and Upper Swan Estuary- Water Quality Profiles – 27 June 2022





Date: 27 June 2022

Weather & tide conditions: Conditions were mostly clear with a variable breeze of up to 4 knots. The predicted tides at Barrack St were 1.28 m at 9:35 am (high tide) and 0.75 m at 8:40 pm (low tide). Perth recorded 2.8 mm of rainfall in the week prior to sampling (Bureau of Meteorology).

Oxygenation: The Guildford oxygenation plant was triggered to provide oxygen and the Caversham oxygenation plant was operable but not 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 from BLA to HEA and brackish over saline at NAR. Waters were oxygenated and well oxygenated throughout this zone. Chlorophyll fluorescence was low and water temperature ranged from 15.4 to 18.5 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was brackish over saline from NIL to RON. Waters were well oxygenated throughout except for bottom waters from STJ to RON which were hypoxic. Chlorophyll fluorescence was low throughout the zone and temperature ranged from 15 to 17.1 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline at SAND and brackish from KIN to POL. Waters were oxygenated or well oxygenated throughout except for bottom waters at SAND and KMO which were low in oxygen, and at KIN which was hypoxic. Chlorophyll fluorescence was low throughout the zone and temperature ranged from 14.1 to 16.8 °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 (no/low flow): 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, 2022. *Swan Canning Estuary water quality profile report, Lower Swan Canning Estuary to Upper Swan Estuary 27 June 2022. Rivers and Estuaries Science* (<https://www.dpaw.wa.gov.au/management/swan-canning-riverpark>)