



Department of Biodiversity,
Conservation and Attractions



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Swan Canning Estuary Water Quality Monitoring Project

Weekly Water Quality Report

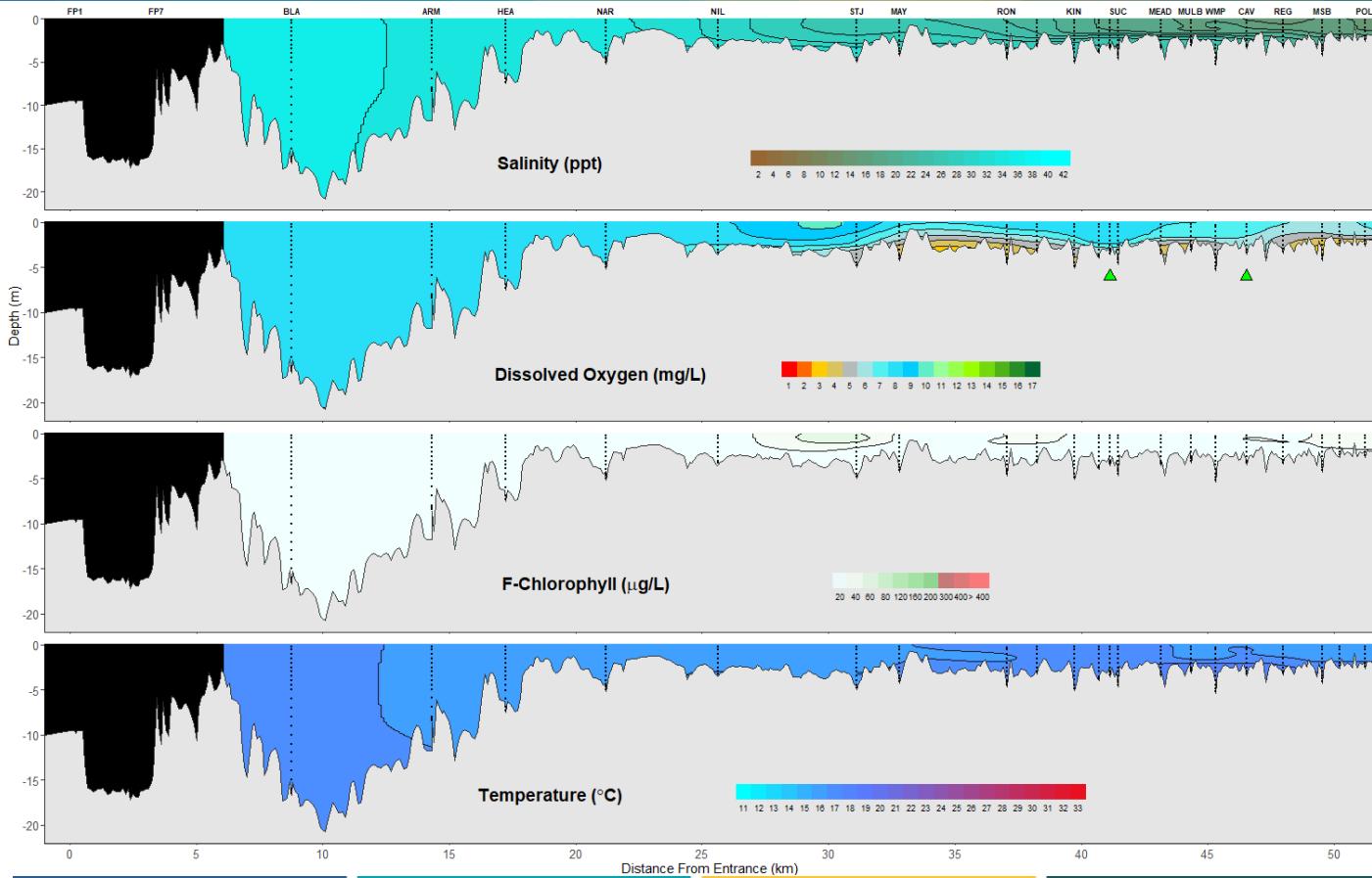
Lower Swan Canning Estuary to Upper Swan Estuary

13 June 2022

Prepared by

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

Swan Canning Estuary- Water Quality Profiles – 13 June 2022





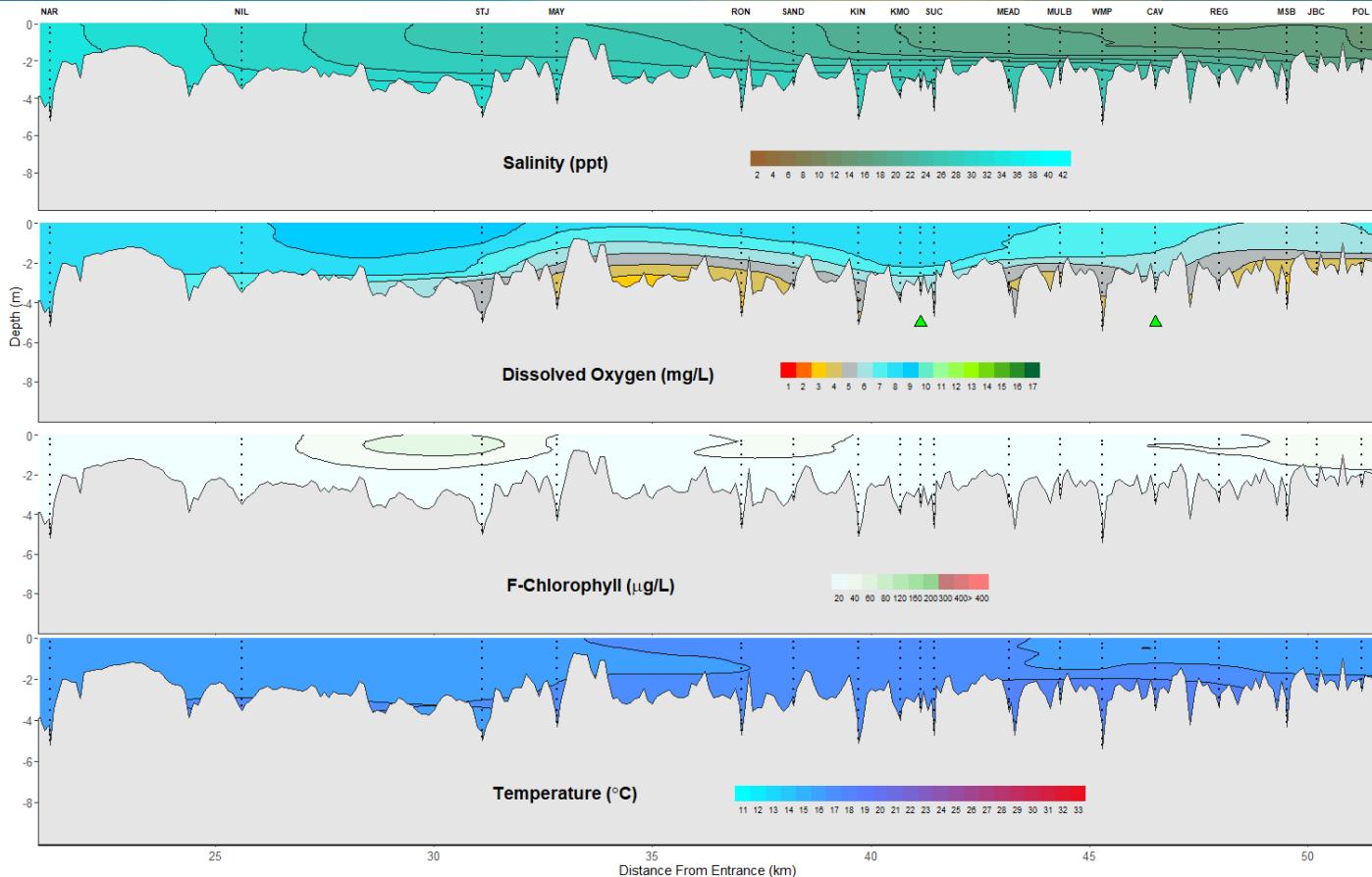
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Middle and Upper Swan Estuary- Water Quality Profiles – 13 June 2022





Date: 13 June 2022

Weather & tide conditions: Conditions were mostly overcast with a predominantly westerly breeze of up to 15.5 knots. The predicted tides at Barrack St were 1.32 m at 10:00 am (high tide) and 0.7 m at 8:35 pm (low tide). Perth recorded 25.2 mm of rainfall in 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 and well oxygenated throughout this zone. Chlorophyll fluorescence was low and water temperature ranged from 15.3 to 16.5 °C at the time of sampling.

Middle Swan Estuary (NIL to RON): The Middle Swan Estuary was saline at NIL and brackish over saline from STJ to RON. Waters were well oxygenated at NIL, surface waters were well oxygenated from STJ to RON and bottom waters were oxygenated at STJ and low in oxygen from MAY to RON. Chlorophyll fluorescence was low throughout the zone, except at STJ where surface waters exhibited moderate fluorescence. Temperature ranged from 15.4 to 16.2 °C at the time of sampling.

Upper Swan Estuary (SAND to POL): The Upper Swan Estuary was brackish over saline from SAND to MULB and brackish from WMP to POL. Waters were oxygenated or well oxygenated at SAND, from KMO to SUC and CAV to REG. Surface waters were oxygenated or well oxygenated at KIN, from MEAD to WMP and MSB to POL. Bottom waters were low in oxygen at KIN, from MEAD to WMP and MSB to POL. Chlorophyll fluorescence was low throughout the zone and temperature ranged from 15.2 to 17.3 °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